

AMERICAN VETERINARY REVIEW.

MARCH, 1905.

EDITORIAL.

EUROPEAN CHRONICLES.

PARIS, FRANCE, January 15, 1904.

MANIFESTATIONS OF STRANGLES vary very much, and all veterinarians in practice for some time, or those who are under special conditions where the possibilities of contagion are frequent and cases numerous, have had occasions to observe peculiar forms probably never seen before and where the true nature of the disease could only be thoroughly established by the microscopic examination of the suppuration and the discovery of the typical microbe. The streptococcus of Schutz has a specificity which establishes the positiveness of a diagnosis; it exists in the state of purity in the pus of strangles.

I have found in several numbers of the *Revue Générale* from the pen of Mr. P. Chaussie the long *exposé* of several observations of strangles which are indeed very interesting, and in which the true nature and confirmation of the cases were always completed by the presence of the typical character. I send our readers a brief extract of those various observations, as they have seemed to me exceptional, and as strangles is one of the most common affections of horses, and one that the practitioner has most occasion to diagnosticate, all peculiar aspects which are not likely to be presented in classical works ought to be made known to all as much as possible.

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Case I.—Sub-parotid Abscess.—A six-year-old mare in which

surgical interference is imposed because the abscess is preventing her from feeding and exposes her to death by starvation, and also because septic pneumonia is possible. The abscess was opened by the introduction of the S-probe passed under the parotid through an incision made below the inferior border of the gland. The wound was enlarged by introducing blunt scissors into it and spreading its branches open. Recovery.

Case II.—Sub-parotid Abscess Opening in the Pharynx—Pneumonia—Death.—The abscess suddenly disappeared, opened in the pharynx and gave rise to a fatal bilateral septic pneumonia, which carried off the animal in two days.

Case III.—Pharyngeal Fistula.—The parotid abscess opened immediately in front of the larynx, a little to the left of the median line. Irritating injections of tincture of iodine brought recovery in four weeks.

Case IV.—Abscess in the Jugular Groove.—Most complicated case where a large abscess in the left jugular groove gave rise to difficult respiration and roaring, which had to be relieved by tracheotomy, and was complicated with necrosis of the œsophagus and ultimately death by septic pneumonia.

Case V.—Abscess of the Prepectoral Glands.—Manifested by enormous abscess more developed on the right side and spreading downwards to the arm, forearm and axilla. Recovery after puncture with the bistoury and the S-probe to avoid bloodvessel injury.

Case VI.—Abscess of the Brachial Glands.—The whole right shoulder, arm, forearm, right side of the breast and of the lower part of the thorax were enormously swollen. The abscess had developed in eight days and was relieved by several punctures, from which very abundant purulent discharge took place. The animal died from general intoxication.

Case VII.—Facial Lymphangitis, following a slight cutaneous scratch of the face and for which mallein was used to make a differential diagnosis. It ended by the formation of abscesses in the sub-glossal glands with abundant suppuration.

Case VIII.—Abdominal Strangles, which ended fatally,

with the formation of three large abscesses of the mesenteric glands, containing several litres of pus.

Case IX.—Strangles Inoculated with the Crupper and Resembling Coital Strangles.—Coming from a stable where strangles prevailed, a mare has slight wounds due to the crupper. One of these is the cause of a large œdema of the vulva. A large abscess is formed at the base of the tail, to the left of the rectum, which gives escape to abundant suppuration. The mare is sold. Another abscess around the anus is formed, interfering with defecation. Ultimately mare recovered.

Case X.—Splenic Strangles.—Mare having had sub-glossal gland strangles remains ailing; there is no lung trouble, but her temperature remains high. Notwithstanding injections of antistreptococcic polyvalent serum, she dies. At the post-mortem the spleen is found enlarged, adherent to the lumbar region; it weighs 15 kilog., 250 grammes, and is infiltrated with pus.

Case XI.—Abscess of Bronchial Glands, or Intrathoracic Strangles.—This case ended fatally with abscess under the trachea at the entrance to the chest. It had others near the vulva, another on the internal face of the thigh. Death occurred suddenly by cardiac syncope.

Case XII.—Coital Strangles.—Mare, covered by a stallion which had had sore throat without abscess. Five or six days after, the mare had inflammation of the vulva and peritoneum. Later on the udder was involved. Antistreptococcic polyvalent serum was resorted to. Abscesses of the rectum ulcerated internally. Others formed within the rectum, another at the entrance of the abdominal cavity, at the lumbar region. Posterior paresia appeared, it progressed and the animal died. At the post-mortem, abscesses were found in the udder, the pelvis, the abdomen, along the vertebral column, a little back of the loins.

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THE EFFECTS OF REPEATED MALLEIN INJECTIONS.—Since mallein has entered into general practice, its use, which was at

first limited to the diagnosis of suspicious cases of glanders, has now made another step which in its practical application has been thoroughly demonstrated by our esteemed collaborator, Dr. Olof Schwarzkopf, in his great experiment in the Philippines. Nevertheless, the question may yet be properly asked: "Do we know everything in relation to mallein? Are we acquainted with all its properties, with all its effects? Perhaps not. And it is for that reason that any question relating to it has its interest.

It was with this idea that Professor Attilio Antonissi made the experiments which he related in the *Clinica Veterinaria*. He had occasion to use mallein on a number of horses; the object was to test their conditions as to glanders. Injections of mallein were resorted to several times, twice and three times, and it is the result of the observations he made that he has published. Although the report does not say what became of the horses, the general results were those that could be expected by the malleinization of healthy, of suspects and of diseased horses. The following, however, are pointed out: (1) It has been observed that with all horses where the injections had been repeated several times their general condition improved; (2) repeated injections have almost constantly brought a sensible and gradual diminution in the thermic reaction; (3) repeated injections, in his experiments, have had for result the reduction in the proportion of suspected glanderous horses, in such a manner that from 19 suspects after the first injection there remain only 16 after the second; and out of 13 only 10 after the third.

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But in relation to the first conclusion, viz., that when the injections were repeated several times, the general condition was raised. I found in the *Revue Générale de Leclairche*, Nov. 1st, an article on the effects of mallein by Mr. G. Deysine, army veterinarian, which differs very much from that of the Italian professor. Glanders had broken out in his regiment, all the horses were malleined, and out of the whole number 17 were con-

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demned and killed. There remained 14 doubtful cases. These were divided into two lots: In one were placed those that had presented a thermic elevation, which lasted to the 20th hour and beyond; in the other those in which the hyperthermia lasted only a certain time and diminished before the 20th hour, with local and general marked manifestations.

All of these horses were placed under the best hygienic conditions, in relation to food, lodging and ventilation. They were malleined every thirty days. After the last two negative tests, they were all returned to their work. They were, however, subjected to close watching. After several months, six of those horses were observed losing in condition and became less ambitious to work. Notwithstanding great care, their general state did not improve. They were malleined again but failed to react. These horses had been submitted to mallein 5, 6, and even 7 times. For supposing that at a certain time they had lesions of glanders, which would explain this condition, the presence of the disease could not be admitted now, and the supposition of the interference of those glanderous lesions cannot be admitted.

Then what is the cause of this abnormal loss of flesh and condition. Is it that the repeated doses of mallein have given rise to a chronic intoxication? This is a point to elucidate. At the time the report was written, one horse had returned to his normal state, the others had ups and downs which demanded care, the three others were still rather poor in flesh and receiving special attention.

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A SCIENTIFIC TEST OF THE ENDURANCE OF THE HORSE.—I received a few days ago a *résumé* of a sporting event which occurred here a while since, namely, the *hippic race* from Bordeaux to Paris, or rather to Versailles—a new sport, which in Europe has of late been making its way among others, such as bicycles, foot ball, automobiles, etc. This race was to cover a distance of nearly 500 miles (800 kilometres), in exact measure 744 kilometres. It was open to all horses, allowing the widest

liberty as far as number of stops, but with only one positive condition, that the animals would, during the totality of the distance, be allowed 65 hours of rest. I gather from the report before me, which was made to the *Société Nationale d'Agriculture* by Mr. Lavalard, a few facts which I think will prove interesting to our readers.

There were 55 horses entered, but only 47 started, October 9, from Bordeaux—32 reached the end of the journey in perfect condition. Among these 26 were in harness and 6 were under the saddle. Among those in harness, the first 8 horses arrived after travelling between 50 and 58 hours. Those that came after, took between 60 and 90 hours. There was among them a male mule, which made the distance in 81 hours 56 minutes and 36 seconds.

Among those which were ridden under the saddle, one took 60 hours 9 minutes and 51 seconds; another 61 hours 26 minutes and 58 seconds. A third one, which had become somewhat disabled, travelled the distance in 82 hours 9 minutes. All the horses, with few exceptions, arrived in fresh condition, and through the attentive care they had on their journey, were able to perform it without difficulty. It was a training experiment more than an overwork; indeed the reports made by the numerous veterinarians which had been appointed at various places to examine the animals as they reached the various stations, show that none of the animals exhibited marks of overwork, fatigue or over-exertion; and they were able to arrive at the end of the race on October 14 in the morning, all in normal condition of respiration and circulation; none were overtired, and, if a few of them seemed to be a little shaky on their legs, a few hours of rest were sufficient to straighten them out perfectly.

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It was not possible to weigh the animals during the whole journey, at every one of the various stations. But taken at the starting and at the arrival, it was observed that the loss in flesh varied between 33 and 31 kilogs. with the harnessed horses.

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For the two animals mounted one lost 56 and the other 12 kilogs. One horse in harness gained 1 kilog.

The temperature taken revealed the fact that the more fatigued the horses were the higher was the temperature. It was as high as 38° , 38.5° and even 39°C . After a few hours of rest, all went down to normal.

The respiration and the pulse followed the condition of the temperature, and yet it has been noticed that even with a distance of 130 kiloms. travelled on an average in one day, the horses would arrive at the end of the trip without excessive perspiration or too accelerated breathing.

In relation to the mode of feeding, only a little information could be obtained, but yet no other food but the one to which horses were ordinarily used to, was given—coffee, wine, bread soaked in brandy, sugared water—in other words, doping—has been certainly used very moderately, as the competitors were afraid of changing the ordinary rations of their horses.

Shoeing is one point which has been at fault, as some horses had to be shod while on the road.

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The following is the record of the first four arrived by day of work :

	No. of Kilo.	No. of hours of work.	Hours of rest.
"Anatole" in harness.	132	7.54	13.31
	135	8.45	14.55
	147	9.29	14.58
	157	10.39	16.29
	143	13.55	5.37
"Frivole."	159	10.34	12.31
	108	7.58	13.12
	147	9.48	13.53
	157	10.22	15.57
	173	13.06	9.17

	No. of Kilo.	No. of hours of work.	Hours of rest.
"Alphonsine" under the saddle.	132	9.50	11.26
	135	11.34	11.51
	147	13.35	12.57
	96	8.57	12.23
	119	8.49	12.28
	115	7.04	4.25
"St. Privat."	159	13.17	10.39
	108	9.11	11.56
	123	10.30	13.43
	120	11.12	11.42
	119	8.56	13.57
	115	8.20	3.32

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After such exhibition who will say that the horse is doomed to disappear? No, his place in society is as grand as ever, and much can be expected from his courage, his energy and lasting power. What is required is to know how to use him and apply him to our domestic needs.

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LITERATURE REVIEWED.—My notes on bibliography must be short, as I have had but little material to look over. But if I have had a scarcity of books, two, however, have proved sufficient to call all my attention.

The first is the new edition of Chauveau's Anatomy. It is always so-called, although for a long time Prof. Arloing has been co-author of this excellent work,—and to the names of these two celebrated anatomists the fifth edition comes out with a third, viz., that of Professor F. X. Lisbre.

It is not my intention nor have I sufficient space to analyze minutely this new work, but since the publication of the successive editions the changes and the improvements have been so numerous and so great that any one acquainted with the preced-

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ing issues would scarcely recognize the good Chauveau's Anatomy of years ago. To-day the work consists of two volumes, 1,434 pages, with 743 illustrations. The first volume treats of locomotion and digestion; the second of respiration, urinary depuration, generation, circulation, innervation and of the diverse sensations. It closes with a few considerations on the development of the foetus and its functions. It is unfortunate, however, that the value of the illustrations does not go with that of the text;—many of them are rather poor and not free from errors, but their usefulness is undoubtable. Great improvement has also been made in the description of the plates, and the student can have but little trouble in finding in the plate the object he is looking for. There can be no doubt of the success of the new work.

The second book which I have received is the twentieth annual report of the Bureau of Animal Industry, that of the year 1903. What can I say of this excellent report of our friend Dr. D. E. Salmon? I have spoken of other reports in terms which I would have to use again in speaking of this one. It is always the same good work that our friend issues every year—with, however, a series of new material, always full of interest and showing the amount of work which is accomplished by the Bureau. Among the many valuable reports that are issued this year I call special attention to those of the worthy Chief, Dr. D. E. Salmon, viz., Some Observations on the Tuberculosis of Animals, bovine tuberculosis affecting the public health, infectious and contagious diseases of farm animals and their effects on American agriculture. Then I find an interesting work on the spread of tuberculosis among healthy cattle upon exposure to tuberculous cattle, by Drs. E. C. Schroeder and W. E. Cotton. Again a work from poor E. A. de Schweinitz and Dr. M. Dorset on the chemical examination of various tubercle bacilli; and when one will look for a special treat, let him read the "Pathological report on a case of rabies in a woman," or "Pulmonary mycosis of birds, with report of a case in a flamingo," both by the Chief of the Pathological Division, Dr. John R.

Mohler. These are a few of the many parts which are treated in the twentieth report. There are many others whose interests may not be as great to veterinarians—yet all deserve attention. The illustrations which are found in the book are very good.

I also acknowledge the receipt of Bulletin No. 1, on "Actino-bacillosis", by Dr. C. H. Higgins; "Mycotic Stomatitis of Cattle," and "Milk Fever, its Simple and Successful Treatment," by Dr. J. R. Mohler; pamphlets from the San Francisco Veterinary College, No. 2 of the *Western Veterinarian*, the Quarterly for September and December of the Kansas City Veterinary College, and that of the Chicago Veterinary College, and finally the catalogue of the publishing house of Mr. Eger, of Chicago.

A. L.

A REFRESHING EVIDENCE OF SANITY.

We very cheerfully surrender a large portion of our editorial department this month to an after-dinner speech of Mr. Samuel Walter Taylor, editor of the *Rider and Driver*, delivered at the annual banquet of the Automobile Club of America, at the Waldorf-Astoria Hotel, New York, last month. The trend of his remarks is in such contrast to the usual character of the utterances on such occasions that it is positively refreshing to observe such evidence of returning sanity, and we commend Mr. Taylor's wisdom and common sense to those swallow-tailed auto-enthusiasts who indulge in asinine twaddle about the extinction of the horse. Previous to laying aside the faithful equine servant (who alone of all means of transportation was able to breast the storms of the present severe winter) let them perfect their hobby to a point where it will move when commanded to and stop when appealed to, and allow the idol of all ages to work out his own destiny in his own way.

"Notwithstanding that much has been uttered with tongue and pen about the inevitable extermination of the horse by the automobile has been ascribed to you, I am here this evening as an earnest of good will and kindly greetings from millions of

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your friends among the noble animal's steadfastly loyal supporters—a mouthpiece and token of fellowship, sympathy and cooperation, rather than as a militant challenger to throw down the defiant gauntlet from a hostile camp. Believing that this rampant rumor of your annihilative spirit has been thoughtlessly engendered, unwarrantably magnified and unauthorized by the humane and intelligent among you, I would take leave to paraphrase Marc Antony beside the gaping corse of immortal Cæsar, and ask you are we here to bury the horse or to praise him? Would you have it go forth from this exquisite banquet that the superb triumph of American mechanical genius and industry, to which we pay tribute to-night, is to be in some sense like Brutus, the assassin of our more than life-long friend?

“Rather would I say for all of us, nay; but that it will be the happy instrument for striking from his lacerated shoulders the fetters of slavery. Sanctified by that visitation of divine favor, through which his lowly manger became the cradle of an epoch-marking event in the progress of the world, his has been a career of ceaseless and uncomplaining toil for us until now, with the coming of the new deliverer, he shall be uplifted to a higher plane of usefulness, a broader field of development, a grander goal of achievement. We have no haughty monarch such as Cæsar dead on the cold slab of our contemplation. It is a living and lovable companion for whom we speak, and I venture to say for you as well as his avowed friends that the human heart does not beat which is without throbbings of reciprocated love and affection. Our President, Mr. Morris, is noted the wide world over as a horseman, and in no social organization probably could there be found more horse owners than are in this most representative Automobile Club of America.

“Would you have it knelled hence that our clubs and garages are to be his tomb? No! Let us acclaim it to the world joyously that we have devised them in part as the gateways of his liberty. In the annals of peace, as in the chronicles of war, the noble beast has been at our side, anticipating our every wish, eager to serve in the yoke of commercial labor, in the caparisons of pomp and pleasure, in the play of sport, and in the smoke and din of battle. Has he had fair opportunity to do aught more for his own uplifting?

“It has been ruthlessly said that the horse is without intelligence, without affection, without gratitude and without any of

the higher order of faculties to differentiate him from the common herd of the lower animal kingdom. Are we of that faith? Not I; and as I glance about me and into the faces of mental and moral and civic attainment grouped here this evening, I see more than responsive negation. With eyes obscured by blinders, with head held rigid in leathern thongs, with mouth encumbered in steel to stifle his every wish, what wonder is it that the noble animal—noble in spite of all these shackles and gags and blindfoldings—should still be dumb? Hark back to the Arab on the desert and the Indian on the plain, to the primordial days if you will, when man and beast slept together under the same blue blanket of heaven, and ask of these dark ages whether or not the equine did his master's behest with the spirit of unquestioning volition, with the impulse of sacrificial affection and with the undying devotion of brother to brother. Unweighted of saddle and unfraught of bit or spur or bridle, his was the body like that of Centaur to answer with deed the thought in the brain of man.

"From the practical and sentimental and physical points of view, how shall we regard the horse of the future? On every hand to-day society is organized not for his extermination but for his perpetuation by purer and loftier breeding. Strife for supremacy has been the unmitigative law of advancement throughout the ages, and with the perfecting of mechanical appliance to match the physical structure of bone and sinew, nerve and muscle, heart and lung, and, last in the past but first in the days to come, the brain of the brute the result shall be higher attainment on either hand. When labor-saving machinery was introduced, the man who labored cried out in despair lest the heritage of sin, his bread by the sweat of his brow, would be taken from him. But there are no less men, albeit there may be less sweat and there is more of sustenance. So may it be with the horse.

"We are told by the minds in the forefront of psychical science to-day that the spirits of the dead communicate with the living; that telepathy and clairvoyance are established scientific facts and that the marvels in the line of psychics, yesterday regarded as superstitions, are but realisms of to-day; mesmerism, discarded in the past, has been vindicated by the hypnotism of the present; halos and the stigmata are believed to exist and due to the magnetic influence. If therefore, as the occultists say, there is a dark continent in the human realm, demanding exploration and promising the richest fruits, what may we not

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expect to evolve, on a lower scale to be sure, if we take into investigation the regenerated animal kingdom with the unmewed horse as the highest type? With philosophical idealism thus becoming vindicated, may we not expect that in proper environment the horse may in time approach nearer to the bar of reason?

"Lest I weary you with further advocacy of the possibilities in store for the horse's development when the automobile has emancipated him from drudgery rather than caused his extirpation; taken him out of the control and debasing influence of ignorant and brutal keepers and fixed him on the par of human companionship in labor, sport and pleasure, I leave you with the suggestions I have offered as the basis for a brotherhood between the horseman and the automobilist which, by wiser laws and more abundant reciprocal privileges, will redound to the credit and the benefit of all who live in this century of wonders and blessings yet to be unfolded."

THE ovation given to Director James Law by the students and alumni of the New York State Veterinary College, on the occasion of the tenth anniversary of the founding of that school on the 15th ult., was but a just tribute to the great work which Dr. Law has accomplished in the forty years he has labored in this country. The gist of the events of the evening are given in an account of the banquet in this number of the REVIEW, and while circumstances prevented us from accepting an invitation to join with those who paid homage to the good dean, we here offer our sincere congratulations to him, coupled with the hope that he may long live to enjoy the fruits of his great genius and indefatigable energy.

THE senior editor of the REVIEW last month in referring to opening addresses at veterinary colleges in America which had been recorded and published, overlooked the fact in his remarks that the late J. Payne Lowe, Esquire, one of the trustees of the Columbia Veterinary College, New York, which school afterwards amalgamated with the American Veterinary College, delivered the opening address before the faculty and students of that institution in October, 1881, years before the other in-

stitutions referred to came into corporate existence. J. Payne Lowe's address was recorded and published in 1881 in the *Pen and Plow*, of which periodical Mr. Lowe was editor, and in numerous other publications in America. J. Payne Lowe was the father of Drs. William Herbert and J. Payne Lowe. All credit to the present workers in the profession, but one must not forget the pioneers in the cause of veterinary education in America—the men who laid the foundation.

FOR the April REVIEW Dr. D. Arthur Hughes has prepared a profusely illustrated article of great worth entitled "The Value of Meat Inspection to the Public Health," in which he deals, not only with the scientific side of the question, but also with its practical accomplishment.

BECAUSE the brood mare is content to stand in the stable is no reason she should be allowed to do so. Keep her outside several hours each day. There must be plenty of outdoor exercise and good feeding to produce a rugged foal.—(*Farmer's Advocate*).

DR. HESTON BRADSHAW died at his home in Trenton, N. J., Feb. 10th, 1905, suddenly from pneumonia. He came to Trenton from Carversville, Bucks Co., Penn., in 1860, and began a practice that continued without interruption to the present time. He enjoyed the confidence of the best people of the city, was a skilful and honest practitioner, much above the average. He was a credit to the profession. He was a brother-in-law and a pupil of the late Isaiah Michener, who was one of the recognized pioneers of the veterinary profession of this country.

(N. M. D.)

AN important ruling was promulgated last week by the Iowa State authorities in relation to live stock insurance. Definite statement has not yet been obtained, but the dispatch says that it has been held that in that State live stock cannot be insured against sickness and death, but may be against accident. As a great many farmers and other owners keep their horses insured against death from any cause it would seem that this ruling must be far-reaching in its effects, more especially when insurance against death by stroke of lightning must be included. Full text of the finding will be submitted as soon as obtained.—(*Breeder's Gazette*.)

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ORIGINAL ARTICLES.

WOUND TREATMENT WITH SPECIAL REFERENCE TO NAIL PUNCTURES OF THE HORSE'S FOOT.

BY L. VAN ES, M. D., V. S., FARGO, N. D.

Of all the injuries and wounds which we meet in practice, there are certainly none which are more important than those of the foot of the horse.

The nature of the wounds and the anatomic relation of the various structures which form the foot not only make them particularly interesting from a surgeon's point of view, but their importance from an economic standpoint should never be overlooked.

I am certain that any one of you will agree with me how difficult it sometimes is to explain to a client how it is possible that a simple nail puncture in the frog can produce so much more serious results or cause a horse to be laid up so much longer than the formidable looking flesh wounds caused by a barbed wire cut. And yet such conditions are so often met in practice that through their common occurrence, they do not always receive the attention which they certainly deserve. This, however, is in most cases more to be attributed to neglect of owners than to that of the experienced surgeon. From my own observations I feel safe to say that the majority of cases of nail puncture in horses do not become the subject of professional treatment until after either owners or horse-shoers have tried their hand with "burning out" or with the poultice, and neither one of those methods of treatment will tend to lighten the task of the surgeon to whom the case is subsequently entrusted or will be in the least productive of any special benefit to owner or patient.

As the process of healing of wounds of the foot and the conditions by which such healing is modified are identical to those in wounds in general, there seems to be no reason why

the principles of modern surgery should not be applicable to the injuries of the foot.

As you all know the following conditions are essential to the normal process of repair, viz: (1) Arrest of hæmorrhage. (2) Correct apposition of the parts. (3) Absolute local rest. (4) Absence of foreign bodies and free drainage. (5) Perfect freedom of microörganisms, asepsis.

In wounds produced by nail puncture, and those are without doubt the most important of the injuries to the foot from a clinical point of view, the two conditions first mentioned may be left out of consideration, while the third in many cases will be fulfilled by the lameness of the horse. The two conditions last mentioned, however, are of great importance and on their fulfilment depends the subsequent course of the healing process.

Like all other accidental wounds, those produced by nail punctures must be regarded as infected from the beginning, and if we are to have healing under aseptic conditions it will only be through our own efforts with the possible exception of the rare cases in which a free hæmorrhage has brought about a mechanical sterilization of the wound canal, and when this sterile condition has been maintained by appropriate wound dressing soon after the injury was received.

If nail punctures were aseptic and could be maintained so, they would but rarely produce serious consequences and it would matter very little what part of the foot received the traumatism or how deep the puncture, but in too many of our cases we have to face infection and sequelæ following in its wake. For this reason all our efforts in treating this class of cases should be concentrated on the following points: To establish asepsis and maintain it wherever possible, and should infection have taken place to so apply what modern surgery has taught us as to remove, destroy or overcome the microörganisms which have gained entrance in the tissues or the effects already produced by them.

It needs not to be pointed out that the earlier those indications are met the better, because only in cases which are pre-

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sented for treatment immediately after the wound is inflicted, may we at all hope to establish aseptic conditions. In such cases the foot involved should be thoroughly cleansed, even before attention is paid to the wound. This may be done by washing and scrubbing with water to which some antiseptic has been added.

This completed, the sole and frog should be trimmed so as to establish a smooth surface and in order to widen the clefts and commissures of the frog and between frogs and bars. This will facilitate the subsequent disinfection of the parts surrounding the wound which is done by a liberal flushing with a hot solution of mercuric chloride (1 to 2,000) applied by means of a fountain syringe or some other form of irrigator.

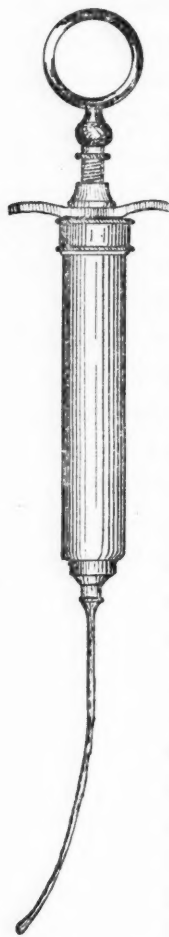
After this the wound may be approached without danger of adding to any infection which may have already taken place. In case the foreign body is still present in the wound it should be removed without causing laceration of the tissues and after its removal it should be carefully inspected in order to ascertain if parts of it could possibly have remained in the wound.

The next step consists in widening the canal of the wound for so far as it passes through the horny structures of the foot. This must be done with a narrow hoof knife, which should have been sterilized previously, and should extend to the sensitive structures of the foot, but no further. The resulting wound orifice is funnel-shaped, with its apex resting on the sensitive parts.

Assuming that infective material has been carried into the wound by means of the nail, our next step should be aimed at a thorough disinfection of the entire wound canal. If we succeed in this, healing by primary intention will take place, and if we fail we must prepare ourselves to face infection and its possible consequences.

The disinfection of the wound canal is difficult as it is not always possible to extend the procedure to the bottom of the wound, especially if we have to depend on the syringes commonly in use in veterinary practice.

Owing to the difficulties thus encountered and especially owing to the large number of cases of nail puncture which fell into my hands while in active practice, I was forced to look about for a method and appliances by which a thorough disinfectant of the nail wounds could be accomplished and an aseptic condition established.



After trying various syringes and appliances I finally came to use the method which has given me the best results. The apparatus used is a syringe with a thin, flexible, probe-pointed nozzle. The syringe is an all-metal antitoxine syringe and the nozzle is made of silver, soft and flexible, about from one and a half to two mm. in thickness, and which can be attached to the syringe in the same manner as a hypodermic needle.

As disinfecting agents, I have used various ones, but obtained perhaps the best results with a five per cent. solution of carbolic acid in a mixture of one part of glycerine to five parts of water. Another solution which I can recommend is a one per cent. Lugol solution with about ten per cent. of glycerine, although the latter solution has the disadvantage of slowly attacking the silver of the canula.

After the parts surrounding the wound are disinfected as before mentioned, the canula, with the syringe attached, is gently introduced into the canal and the fluid slowly poured into the wound, taking care to avoid great pressure and allowing the fluid to escape along the sides of the canula as it is forced from the syringe. Disinfection of the wound must be done thoroughly; the operator should not be hasty in his work and several syringefuls have to be used before the task is accomplished.

In the cases in which the presence of a foreign body is suspected the canula also serves the purpose of a probe, which has

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this advantage over the solid instrument, that the probing can be done with a constant return flow of an antiseptic solution, thereby reducing the danger of mischief produced by forcing septic matter into the depth of the wound.

It is scarcely necessary to say that syringe and canula are to be kept thoroughly aseptic.

After having thus attempted to render the wound and its surroundings aseptic our next aim should be to maintain it so; and in this effort we usually experience the greatest difficulty. While the foot can be readily enclosed in suitable dressings, and while those dressings can be kept in the desired position without much trouble, their constant contact with the soil, floors or moisture renders the exclusion of septic matter very difficult.

As long as our patients are kept in clean, dry and well-bedded stables, there always is a probability of success; but when an animal stands in a place covered with manure and moisture, the ordinary dressings soon soak through and wound infection is sure to follow. For this reason we should always insist that our patients be kept in a clean and dry place.

The method of dressing is the same as used in the treatment of wounds in general. A few layers of sterilized gauze are placed over the wound, this is covered with a thick layer of absorbent cotton, while the whole foot is then enclosed in a layer of oakum, the whole being kept in position by means of a roller bandage. In place of the gauze I have often used simple absorbent cotton which had previously been treated with iodine; this was done as an extra precaution against tetanus, a disease endemic in the locality where I practiced. In cases where the dressings are apt to be soiled by moisture I have often placed a layer of oiled muslin under the bandage or have covered the bandage itself with a thick layer of pine tar.

In many cases the bandage was dispensed with and the dressing secured by means of pieces of band iron kept in position by the shoe. This method, however, is not near as satisfactory as the former and was only used when the owner insisted on keeping the horse at work.

As very frequently the wound becomes infected in spite of all our efforts and this infection is not always to be ascertained, otherwise than by a local examination, it is well to remove the dressing after forty-eight hours for the purpose of inspecting the wound. If the latter is found to be free of pus, the surrounding parts are again disinfected and the dressing applied as before.

Infected wounds always require far more care than aseptic ones and may, on a clinical basis, be divided into two classes, viz. : shallow ones and deep ones. To the former belong those which do not extend in depth beyond the papillary layer, and to the latter those which penetrate the deeper structures, including bone, fatty cushion, tendon or articulation.

In the first class of cases there is always inflammation of the whole superficial layer of the sensitive structures, which is accompanied by exfoliation of the hoof horn, corresponding in extent with the underlying area of inflammation. This may remain localized in the immediate vicinity of the wound or extend for considerable distance, when the hoof horn becomes undermined, and a sero-purulent discharge makes its appearance at the quarters, when frog or sole are involved, or at the corona when the puncture took place close to the white line.

The indications to be met in such cases are a removal of the loosened horny structures and a daily application of antiseptic wound treatment.

In the majority of cases the removal of the horn is about all that is desired, as it is often found that the initial wound has healed before the condition spoken of is discovered. In some of this class there is a necrotic condition of the outermost layer of the soft structure, while in others a mass of unhealthy granulations is seen after the removal of the exfoliated horn. The necrotic tissue should always be removed, the parts well disinfected with a sublimate solution, after which they may be dusted with an antiseptic drying powder and the ordinary dressing supplied.

In case of granulations they may be removed with the

curette or be treated with astringent applications. I have often treated them with a five per cent. solution of iodine and glycerine. Dressings should be frequently changed as long as the parts remain moist.

When the parts remain dry an oakum protection is all that is required until the hoof horn is of sufficient firmness to withstand the ordinary wear and tear.

The second variety of cases are those which give us the most trouble ; they sometimes terminate fatally and quite often give rise to chronic lameness.

One of the most common conditions here is phlegmon of the fatty cushion, and here, of course, all our efforts should be used in establishing free drainage and in the disinfection of the parts. In most cases of this kind the wound should be enlarged in order to make drainage and antisepsis possible. This enlargement will also enable us to explore the wound thoroughly, which is always advisable in order to find and remove any gangrenous tissue which may be present. Should any necrotic tissue be found, it may be removed by means of the sharp spoon or curette.

In the application of antisepsis, the sublimate solution is perhaps the most efficient, but it must be applied in liberal quantities and while quite warm.

In deep punctures of the plantar cushion in which sepsis is present or cannot be avoided I would always recommend that a counter opening be made wherever such is possible, and that this opening be made large enough so that the wound canal may be flushed from above as well as from below.

In dressing this class of wounds absorbent cotton should be liberally applied and dressings should be changed as often as the quantity of wound discharge may demand.

In cases in which the bone has been injured, free drainage should also be provided for, and in addition any part which has become necrotic should be thoroughly removed by means of a sharp spoon. Thorough disinfection with a sublimate solution is to be daily practiced and the dressing described above should

be applied in order to protect the parts against additional contamination and with a view of removing the wound's secretions.

In injury of the tendon or bursa, free drainage and antiseptic treatment must ever be provided for, as from a surgical point of view the same indications are to be met as in the preceding complications. In the experience of the writer, however, septic wounds of the parts mentioned have been frequently followed by necrosis of the tendon, a complication which often required radical operative measures.

Before concluding, a few words in regard to the use of the poultice may be said. Surgeons have now had sufficient time to learn the value of excluding bacteria from healing wounds. In the modern treatment of wounds, not only efforts are made to inhibit germ life by the use of antiseptics, but the wounds are kept free from substances which may furnish nourishment to bacteria and before all the wounds and everything in connection with them are kept as dry as possible, a surgical principle based upon the fact that moisture is imperative to germ life and growth.

In applying poultices, everything favorable to germ life is being provided: The moisture, nourishment, as well as the optimum temperature and in the great majority of cases the bacteria themselves. In an extensive experience with nail wounds in the horse's foot, in which to some extent poultices were in use, as well as the antiseptic treatment, I was led to depend entirely upon the latter and to conclude that in all cases in which poultices were used they did more harm than good.

MILK TRUST.—*Trenton, N. J., Feb. 15.*—The American Butter Refining Company, with its registered office in Jersey City, this afternoon filed articles of incorporation with the Secretary of State. The capital of the concern is \$17,000,000. The company is chartered to deal in milk and all milk and food products, and to buy up the business and plants of other like corporations. The incorporators are Walter E. Hope, Beverly R. Robinson and E. T. S. Thygeson, of Jersey City.—(*N. Y. Evening Sun, Feb. 15, 1905.*)

AN ANOMALOUS CRYPTORCHID.

BY CHARLES FRAZIER, M. D. V., INSTRUCTOR IN ANATOMY AND SURGERY AT THE SCHOOL OF VETERINARY SCIENCE OF THE WASHINGTON STATE COLLEGE.

The possibilities in veterinary surgery which may be realized by perfecting the means of performing aseptic operations was illustrated recently by an operation upon a cryptorchid in the clinic of the Veterinary Department of the Washington State College.

The operation in question was performed upon a very unusual case in which the retained testicle, weighing nearly fifteen pounds and measuring eleven inches in the greatest diameter, was removed through an incision in the flank, thirteen inches in length. The wound healed by primary union with the exception of a portion of the skin incision and the patient made a nice recovery.

The animal was first operated upon on May 23, 1904, by the usual method, the entrance to the abdominal cavity being made through the inguinal region. Upon discovery of the much enlarged testicle, however, it was decided that removal of it through the inguinal region would be impracticable because of the necessity of a large incision in so dependent a region. The wound was dressed and the patient allowed to rise.

On June 7th, the second operation was performed and the testicle removed. Previous to the operation the animal was dieted by being placed on light rations for several days. No physic was given, neither was the food completely suppressed at any time. It is the writer's opinion that the best results in abdominal operations are obtained if such operations are carried out when the intestines are moderately full of ingesta and free from the irritation of physics. An empty bowel irritated by the action of a physic and further irritated by an operation, certainly predisposes to volvulus, colic, peritonitis and these are bad complications.

Before being taken into the operating room the patient was

made as aseptic as possible by repeated brushings and creolin baths. Throughout the operation the principle aimed at was to have as near perfect aseptic conditions as possible.

The animal was placed upon the operating table with the left side exposed, and chloroformed. An incision was then

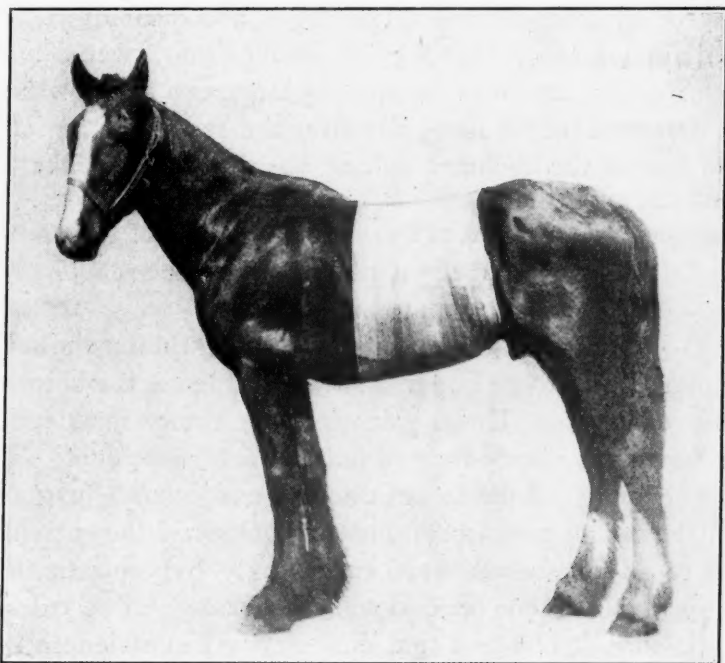


THE ABDOMINAL INCISION.

made in the flank, beginning about four inches below the transverse process of the lumbar vertebræ and three inches in front of the anterior iliac spine, and extending downward for a distance of thirteen inches. The incision was carried through the skin and external abdominal muscle down to the internal ab-



THE TWO TESTICLES REMOVED FROM THE PATIENT.



GENERAL APPEARANCE OF THE PATIENT ON THE THIRD DAY AFTER OPERATION AND SHOWING RETAINED ABDOMINAL BANDAGE AFTER HAVING BEEN WORN THREE DAYS.

dominal, which, with the transversalis and peritoneum, was incised in the direction of its fibres. The testicle was forced through this opening by means of tenaculums and by an assistant manipulating in the rectum. The wound was closed by three sets of sutures. The peritoneum and transversalis muscle was included in one; the internal oblique in another, and the skin and external oblique in a third. Gut was used in the first two and strong silk in the third.

After being taken from the table the abdomen of the patient was bandaged. Roller bandages moistened with a corrosive sublimate solution containing a small amount of starch was applied. The starch had the effect of preventing the bandages from shifting their position after drying.

The attached copy of the hospital record shows the after-treatment and the progress made by the patient.

The testicle was a flattened, ovoid body, measuring eleven inches in greatest diameter, and eight and one-half inches in least diameter and weighing fourteen pounds, twelve ounces. The spermatic cord was varicose, as large as a man's wrist and about fourteen inches long, allowing the testicle to lie forward on the floor of the abdomen among the intestines. The blood supply was enormous.

Following is a report of the morbid anatomy of the specimen by Dr. Maynard Rosenberger, pathologist of the school.

MORBID ANATOMY.

(a).—*Macroscopy*.—Examination of the tumor showed the testicular artery to be larger than a carotid and the veins enormously enlarged. Upon palpation the tumor mass appeared hard, having in places areas of fluctuation. Sectioning showed the enveloping tissues to be adherent and almost inseparable. From the tunica propria, fibrous tissue ramified the entire mass. These ramifying bands were exceedingly hyperplastic and in places had undergone calcarious infiltration. The calcarious deposits were so compact that difficulty was experienced in severing the mass with a heavy bistoury. Areas of gelatinoid degeneration were numerous. These were present in sinuses,

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surrounded by fibrous walls. In some instances the sinuses were one and one-half inches in diameter.

(b).—*Microscopy*.—For microscopical examination, tissues were selected from areas in process of degeneration. These showed a fibromatous formation with cavernous blood vascular changes and gelatinoid degeneration as secondary changes. No spermatozoa were found.

Tuesday, June 7th.

Operated, 2.30 P. M.

	Pulse.	Temperature.	Appetite.	General Appearance.
6 P. M.	48	103	Good.	Good.
10 P. M.	48	102.8	"	"

The patient was given one ounce of alcohol and a small bran mash, at six o'clock.

Wednesday, June 8th.

	Pulse.	Temperature.	Appetite.	General Appearance.
6 A. M.	40	101	Good.	Good.
8 A. M.	42	101	"	"
10 A. M.	42	101.5	"	"
12 M.	42	102.5	"	"
6 P. M.	48	103	"	"
10 P. M.	48	103	"	"

Was fed light feeds of bran, oat chop and hay at morning, noon and night. For treatment a pint of linseed oil was given at eight o'clock A. M., and an enema of warm water at six P. M.

Thursday, June 9th.

	Pulse.	Temperature.	Appetite.	General Appearance.
6 A. M.	42	103	Good.	Good.
8 A. M.	42	103.4	"	"
12 M.	48	103.6	"	"
2.30 P. M.	48	103.6	"	"
6 P. M.	48	103.7	"	"
10 P. M.	48	104	"	"

Treatment and feed same as on previous day.

Friday, June 10th.

	Pulse.	Temperature.	Appetite.	General Appearance.
6 A. M.	42	102.5	Good.	Good.
8 A. M.	45	102.7	"	"
12 M.	45	103.3	"	"
3 P. M.	45	103.5	Fair.	"
6 P. M.	50	104.2	"	Fair.
10 P. M.	45	103.3	"	"

The dressing was removed at six o'clock P. M., and the wound irrigated and rebandaged. There was no appearance of sepsis. The patient was given alcohol, two ounces, quinine sulphate, one-half drachm, dilute sulphuric acid, one-half drachm. This dose was repeated at ten P. M.

Saturday, June 11th.

	Pulse.	Temperature.	Appetite.	General Appearance.
6 A. M.	42	101.4	Good.	Good.
8 A. M.	45	101.7	"	"
12 M.	45	101.6	"	"
6 P. M.	45	101.6	"	"

As shown by the above record the patient was apparently normal on this day. The pulse and temperature remained normal. The record is interesting in that it shows that in cases of this kind, so long as the heart action is normal, a temperature of as high as 104.2 F. does not necessarily indicate serious infection.

The wound healed by primary union with the exception of the lower half of the skin incision. On Monday, June 13th, a subcutaneous serous collection necessitated opening the lower portion of the external set of sutures. The patient left the hospital on June 30th.

THE VETERINARY BRANCH IN MANITOBA.—It is understood that the Veterinary Branch of the Department of Agriculture at Ottawa, is to take charge of contagious diseases of animals in Manitoba.

NECESSARY QUALIFICATIONS FOR PRODUCING WHOLESOME AND CLEAN MILK.

BY JAMES M. MECRAY, V. M. D., MAPLE SHADE, N. J.

Presented to the 21st annual meeting of the Veterinary Medical Association of New Jersey, at Newark, N. J., January 12, 1905.

Under existing conditions there seems to be no way that the consumer can be assured or made certain that milk is as represented by the dealers. The persons who handle milk, from the most slovenly servant to the dainty dairy maid, are positive that their habits of cleanliness are unquestionable and are perfectly willing to certify that the milk they handle is absolutely clean and pure. The dealers have the same positive ideas, yet they may never have seen the cows from which it was taken, inside of the stables, milk house, or the care the milk received before it was delivered to them, and the only proof they have of its purity is the word of the owner.

The most ignorant and slovenly people are just as positive that they are furnishing a first-class article as it is possible for the most scrupulous and intelligent men in the business to supply. Consumers are impressed by this to a certain extent, some because it was the custom of their forefathers, others because they neglect to consider the subject. Some people are willing to buy shoddy goods wherever they can be purchased, the cheapest irrespective of quality; others will purchase only the best goods of the most reliable dealers. There is still another class of people who seem to be very particular in purchasing clothing, furniture, etc., but who are totally indifferent to the character of other things far more important, as milk and meat.

Milk to be wholesome and clean should be obtained from clean, healthy cows by a clean, healthy person, in an atmosphere as free as possible from dust, odors and germs; it should be aerated and cooled quickly and kept cool until used, in a clean well-sealed receptacle. This appears to be a simple, easy operation, yet it is nearly impossible to produce and transport milk from the dairy to the consumer without it becoming contami-

nated with stable odors, dirt, dust and germs from wherever it is exposed to the air.

When we consider that a drop of milk may contain virulent bacteria enough to exterminate a whole family, it will be seen how important it is that every step in the process of handling milk should be guarded with the most faithful and intelligent attention. There are many people who can never appreciate the importance of this work.

Bacteriology and sanitary science have demonstrated many facts in the past few years which, if properly applied to the dairy interests, will revolutionize the whole system. No progressive producer or dealer can ignore these facts; it may not be practical for these persons to possess the necessary knowledge to prescribe the rules that must be in order to produce milk according to the most approved and scientific principles; nevertheless, they should be intelligent enough to follow these rules when pointed out by those who do possess such knowledge. Science has shown the way, why not follow it?

One reason is because too many of our scientific men who are familiar with these subjects are too busy with their investigation to make practical applications of the facts they already possess; others let politicians and men not familiar with the importance of this work, make the laws and prescribe the methods by which the work shall be executed. Chemistry furnishes the necessary facts to determine the chemical constituents of milk and the nature of antiseptics used to often preserve milk. The bacteriologist can determine the number of germs in milk and something of their nature, and many of the numerous sources of these and larger particles of dirt.

There seems to be no reason why these sciences should not be represented in prescribing how milk should be handled, and in judging if its qualities have been followed. With the present knowledge it is not possible to produce for market milk that is free from germs. (Consequently pure milk does not exist.) Bacteriology shows us that commercial milk contains from 100,000 to 1,000,000 germs and more per c. c. Under what appears

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to be the most scientific system of handling milk at the present time, it has been produced in the country and inspected every day for nearly two years at the Pepper Laboratory, by a capable, honest bacteriologist, who has found the germs to average less than 10,000 per c. c. during this time. The work has been accomplished through the generosity of a member of the medical profession who realizes the importance of such service. These results have been obtained without pasteurization, sterilization or the addition of preservatives. They have been accomplished by faithfully following scientific methods.

To produce milk so free as this milk was produced from germs and dirt, which I believe to be the best results recorded, it has required the most careful supervision and instructions by persons who have devoted their whole attention to the subject of producing wholesome milk. It takes the milkers weeks to become proficient enough with a good instructor, to obtain milk so nearly pure. With a little carelessness on the part of the handler, or unnecessary disturbance around the stable or milk house, the germs may increase 100,000 per c. c. or more in one day.

Fortunately the majority of germs that gain access to milk are non-pathogenic, or not disease-producing germs, yet they have no beneficial action and are foreign to pure milk.

Among the disease-producing germs around a stable, the colon bacillus found in the fæces of cattle is perhaps the most common; it is well known that this germ causes severe digestive disturbance in the human family. Tubercle bacilli, which causes tuberculosis, while not so common as formerly (thanks to science), are still present in large numbers. We admit that there is no experimental proof that tuberculosis has been transmitted to the human family from such a source. I think Dr. Pearson, of Philadelphia, developed a tubercle from a scratch while holding a post-mortem, and Dr. Taylor, of Camden, called my attention a few days ago to a butcher, who developed a tubercle the same way. Yet the circumstantial evidence is so strong that it should convince the most skeptical person, milk from

tuberculous cows when used for experimental purposes has been found to produce tuberculosis beyond a doubt; even dust from stables where tuberculous cattle are kept has been shown experimentally to produce tuberculosis; many cases of tubercular udders and generalized tuberculosis have been found by inspectors in herds that are managed by intelligent dairymen before they even suspected anything wrong with the health of the animals. Science again has a remedy to eliminate the dangers of this malady, not only the bad cases of tuberculosis, but those that will be bad in the future if they are not eliminated. In tuberculin we have a safe, harmless method of pointing out the tuberculous animal in a herd, that is as far superior to the old method of physical diagnosis as the microscope is superior to the naked eye.

Milk may contain myriads of tubercle bacilli, also the germs that cause diphtheria, typhoid fever and many other germs that produce contagious diseases, and still appear perfectly normal to the naked eye and smell, lactometer and all ordinary tests. To overcome these dangers, it is necessary that the cows and attendants should be healthy and clean, the sanitary condition of the stables, milk house and milking utensils should be carefully guarded, the stables should be well lighted. Sunlight is one of the best and cheapest disinfectants we have. The stables should be roomy; there should be one cubic foot of air space in the stable for every pound of animal weight. In addition to this the stables should be well ventilated. In the majority of stables the cows have about one-half of this amount of air space and little light or ventilation supplied. With these conditions, it is impossible to perform the operation of milking without the milk becoming contaminated with stable odors, thousands of germs and dirt.

Food and water are important factors in the production of wholesome milk. The food must be clean, fresh and free from odors; the same is true of drinking water, which is as cheap as sunshine and pure air, yet it is often supplied to the dairy cow in the filthiest kind of a mudhole, or go without water.

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You may think these facts are too well known to be spoken of, yet these conditions exist not only among the poor and ignorant, but also among the better class of farmers.

Many of the producers and dealers realize the necessity of sanitary measures and the importance of keeping healthy cattle, others try to copy their efforts and use such measures only to deceive their customers. We can see an illustration of this every day on milk wagons as "Pure Milk," "Pure Country Milk," "Alderney Milk," and many other forms of lettering, which serve only to decorate the wagon and deceive the people. We believe that the veterinarian should not only be able to diagnose and treat sick animals, but he should also know how to direct their care to prevent sickness. His clients have a right to expect him to be familiar with the best system of care and feeding, not only for sick animals but for those in health. We should study feeding carefully that we may know how to prescribe the best and most economical rations for dairy cattle. By careful feeding many diseases can be prevented.

Preventing disease is the most noble work of a veterinarian. We should understand thoroughly sanitary conditions and the best and most scientific process of handling milk. Many gentlemen who are particular where they buy their cigars are buying milk for themselves and families with as much thoughtlessness as is exercised in buying coal oil from anybody who has it to sell. The question naturally arises how can these difficulties be overcome? There is already a milk inspection system in operation in some cities. The Veterinary Department of the University of Pennsylvania has done and is doing a great deal of necessary work, perhaps as much as it is possible to accomplish by legislation for a large city.

It has been demonstrated that the best results in the production of wholesome milk can only be obtained by an intelligent coöperation of inspectors, dealers and producers; a system should be established for the production and handling of milk, then the working of this system should be carefully inspected as well as the milk that is produced under it; this system should

be formulated and established by a commission of scientific men, men who are familiar with bacteriology and sanitary science; such a commission might be composed of veterinarians; they should possess knowledge of these two sciences and also of the diseases and care of animals more than we could expect of members of any other profession.

But in order that wholesome milk shall be a success there must be a demand for such milk. The people should be educated to see the advantages to be derived from a scientific handling of milk and we must look to the medical profession for assistance in furnishing the necessary education; they can see the advantages of handling milk in a scientific manner, and possess the influence to establish these facts in the minds of the people. It would therefore seem best that the commission should be made of scientific, energetic men in the medical profession; veterinarians, dealers, scientific men and producers could coöperate in formulating and establishing the most scientific and practical methods by which the work could be done. Medical societies, or committees from these societies, could constitute the commission, which should adopt the system that seemed best; the commission should select the necessary assistance to carry on the work; among the assistants necessary should be a veterinarian, bacteriologist and chemist; there should be an agreement with the dealer to use his best efforts to produce milk in accordance with this system; regular inspections and reports should be made to the commission, and if satisfactory they should certify or guarantee the milk to be as represented; the dealer should get a better price for his milk; it has a right to be sold as a first-class article; there is no merchantable article where all is sold for one price, whether good or bad, and handled by a reliable dealer or a cheat. Why should it be so with milk which we all know to be one of the principal articles of diet from birth till old age, whether sick or well? Why should it not be paid for according to its cleanliness and quality?

The subject of producing milk according to scientific princi-

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ples is nothing new or original. A commission was established in New York City, composed of fifteen representative members from the medical profession ; they adopted a scientific system to be followed in the production and handling of milk and its inspection ; they entered into a contract with the producer to furnish milk according to their directions. By the terms of the contract the commission must be satisfied as to the qualifications of a physician employed to inspect the help on the farm ; this physician was required to inspect all the helpers twice a month and report to the commission ; they must be satisfied the helpers are healthy and free from transmissible diseases, and possess clean habits. A veterinarian, bacteriologist and chemist were also chosen by the commission and paid a fair sum for their services by the producers ; they reserved the right also to employ any other expert inspector considered necessary by the commission ; the veterinarian must inspect all cows before admission to the herd, and once a year at least thereafter if the cow is to be kept in the herd. New animals when brought to the herd must be quarantined for a reasonable length of time, or until the veterinarian is satisfied they have no transmissible disease ; he is to inspect the sanitary conditions of the premises and the health of the cows used in the dairy once every two weeks and report the results of this investigation to the commission. The bacteriologist must be satisfied with this system of handling milk and make such inspection of the milk and dairy as he or the commission think necessary. The chemist analyzes the water used and determines the chemical constituents of it and of the milk, and reports the same to the commission.

The producer has been able to sell milk under these conditions at a reasonable price, a few cents in advance of the retail price of common milk ; pay his help more, as he must have a better class of help, and is satisfied to continue the work on scientific and business-like principles, not alone for his love of mankind, but from a financial standpoint.

There are some dealers in Philadelphia trying to produce wholesome milk under the same scientific principles as described

above, but have no commission to encourage and assist in the matter. Scientific men in the cities are too much inclined to stand back and wonder if it can be a successful effort.

I believe that the medical societies and the veterinary medical societies should appoint a joint committee to investigate the work, a report should be made on the conditions, and if found to be satisfactory these societies should endorse the work already being done and that of any new dealers who may choose to furnish milk according to the same or similar methods and thus show that the efforts being made in the line are being appreciated.

It is not claimed that this system is perfect, neither is it claimed that the milk is perfect, but the system is far superior to any other yet advanced and the milk contains all the constituents that nature can supply with no preservatives or artificial coloring matter, unnecessary germs or filth. Science can demonstrate that it is much cleaner and safer and is nothing but practical common sense.

I believe that all intelligent people should unite in an effort to create a more practical application of scientific principles in handling milk. The Dairy Division of the Department of Agriculture of Washington, the dairy schools, and experimental stations, are each doing their best to bring about this reformation. Every dairyman and dealer should be encouraged to bring about a system of wholesome and clean milk by every person and encouraged by the medical profession. By such assistance, ignorant and dirty milk producers would be driven out of business. It may be a long time before properly wholesome milk will be required by the citizens, but it will be, sooner or later, and the sooner the better, and I can see no reason why it should not be the universal milk.

A BILL to prohibit the docking of horses' tails has been introduced into the Missouri Legislature and the committee to which it was referred has reported it out with a recommendation that it pass.

FILARIÆ.

BY W. REID BLAIR, D. V. S., VETERINARIAN AND RESIDENT PATHOLOGIST NEW YORK ZOÖLOGICAL PARK.

Presented to the 21st Annual Meeting of the Veterinary Medical Association of New Jersey, at Newark, N. J., January 12th, 1905.

FILARIA IMMITIS (LEIDY).

While this filaria is commonly found in man and dogs in China, Japan and the East generally, it is not, however, unknown in America and Europe.

Its usual habitat is the right side of the heart and pulmonary arterial system, where it occasionally occurs in such large numbers that it is difficult to see how the circulation can proceed.

To the unaided eye, the sexual differences are readily discernible.

The female worms are usually more numerous and of greater length than the males. The length of the female is from 6 to 11 inches, while the male is about 5 inches. The body has a white metallic lustre and the mouth has six small papillæ.

The female maintains almost throughout a uniform calibre of $\frac{1}{35}$ inch, but at the cephalic it diminishes to about $\frac{1}{50}$ inch and at the caudal extremity to about $\frac{1}{100}$ inch.

The oviducts of the females are usually crowded with eggs in various stages of development. The largest contain coiled embryos. The male parasite is readily recognized by its comparatively slender body, having a diameter of about $\frac{1}{30}$ inch, and also by its spirally curved tail, which is three or four times twisted upon itself with the regularity of a corkscrew.

The coiled portion is much narrower than the body of the worm, gradually becoming attenuated to the breadth of $\frac{1}{300}$ inch, the extreme point, however, terminating bluntly as in the female.

Unfortunately, so far as I know, the life history of this parasite has not yet been ascertained, so that it is difficult to

decide whether the *Filaria sanguinis canis* and *Filaria sanguinis hominis* found in the blood of man and dogs are not embryonic or immature forms of the *Filaria immitis*.

A microscopic examination of the blood from cases suffering from persistent anæmia and obscure circulatory manifestations may reveal the presence of the ova or young filaria.

The embryos of one or more nematoids have been found in large numbers in the blood of the dog by a number of investigators, among whom are Gruby and Delafond, Lewis and Manson.

The hæmatozoa of Lewis is described as a long, thin worm with an extremely delicate tail and a round mouth, which expands, acting like a sucker.

In France, Gruby found these hæmatozoa in 4 to 5 per cent. of the dogs examined, while in China, Calcutta and Italy they were found in 33 per cent. of the animals examined by Manson and by Lewis.

According to Gruby and Delafond, Rieck, the number of hæmatozoa in a single host varies greatly but is usually enormous. They found from 3 to 15 in a single drop of blood, or from 11,000 to 1,000,000 in the patient.

They have been supposed to pass from dam to fœtus, but Gruby and Delafond could not detect them in the blood until the puppy was 5 to 6 months old.

It is thought that the embryos live for a time in fresh water, and are then taken up by a species of fresh-water crustacean, in whose body they undergo further development and by the ingestion of which the infection of the human subject and dogs occurs.

One of the embryonic stages of development is believed to take place in the body of a species of nocturnal mosquito. Through the bodies of the dead mosquitoes, which are liable to fall into the drinking-water, it is believed that the spread of the parasite may occur.

However, this much is known, that the parasite prevails especially in regions where the ground is low and wet and where

there is every opportunity for the external existence of the worm in water or some aquatic host.

It is interesting to note in this connection the occurrence of this parasite in a number of California sea-lions in the New York Zoölogical Park.

These animals were kept in an artificial pool and lived exclusively on fish, which is their natural food.

The animals, which were apparently in prime condition, were suddenly noticed to refuse all food and developed pronounced symptoms of broncho-pneumonia and convulsive attacks, which shortly terminated in death. In all these cases the filaria were very numerous. They were found in the heart wound around the *columnæ carnæ* and *cordæ tendinæ*.

They were also found in the pulmonary artery and in its ramifications in the lungs. In the right ventricle of one sea-lion I found fourteen filariæ, only three of them being males.

An absolute diagnosis may sometimes be secured by microscopical examination of specimens of blood obtained from a suspected case and finding the embryos, which are furnished with a delicate pointed tail.

Manson noted a habit of these embryos of abounding in the superficial bloodvessels during the night and retiring to the large vessels of the chest and abdomen during the day, after the manner of the *Filaria sanguinis hominis*.

Dr. Frank H. Miller, of New York, recently sent me specimens of blood obtained from a dog infected with *Filaria immitis*, which showed these embryonic worms.

The *Filaria immitis* does not often betray its presence by any recognizable symptoms during the lifetime of the infected animal.

In the majority of instances the worms are found at the autopsy of animals which have died after various morbid manifestations. Death is usually sudden or has been preceded for an hour or two by dyspncea and convulsions.

Frequently the animal has exhibited for a variable number of days dullness, debility, local dropsies and more or less fre-

quent attacks of convulsions or epileptiform seizures.

Respirations are often hurried and spasmodic in character.

Treatment.—It is but seldom that the necessary advantage of an early knowledge of the true nature of the affection is secured, and when the trouble has become apparent, it is often too late to resort to the remedical measures which might have been employed in the early stages.

It is obvious that nothing can be done when the parasites have once obtained possession of so vital an organ as the heart.

However, Law reports having obtained a steady improvement by giving daily 10 drops of a one per cent. solution of arsenite of soda in combination with *nux vomica*.

FILARIA GRACILIS IN A SPIDER MONKEY.

This interesting monkey, Geoffroy's Spider Monkey (*Ateles geoffroyi*), is a native of South America. They are found inhabiting both the Atlantic and Pacific Coasts of Nicaragua, United States of Colombia and Costa Rica, where they occur in large numbers from the coast forests up to nearly 6,000 feet on the mountains.

This species derives its trivial name from its long and slender limbs and by its light and very slender body, which is narrower across the loins than across the chest.

The head is rounded, and the muzzle somewhat projecting. Both pairs of limbs are much elongated, the hind limbs being shorter, however, than the fore, and the thumb of the fore limb entirely absent.

The Greek word *Ateles* signifies *imperfect*, and is applied to this genus in allusion to the absence of the thumb on the hands, which characterizes them.

The tail is very long (26-27 inches), generally exceeding the length of the body and head, and is nude on the under side, and very sensitive towards its termination. As a prehensile organ, it has reached perfection, serving as a fifth hand.

The spider monkeys are great favorites in the menageries, as they are remarkably intelligent, gentle in their manners, and exceedingly light and graceful in their movements.

History.—My attention was first called to the case on the morning of March 25th, by the keeper, who said that the animal's face was swollen and that it had severe diarrhœa.

On close examination I found the swellings to be confined to under the eyes and nostrils, and pitting on pressure, but not particularly painful; no evidences of any external injury or pus. Heart rhythm irregular and inclined to depression. I made a small incision into one of the swellings, which showed œdema.

Treatment.—The animal was given a liberal diet of rice, fruit, etc., with small doses of digitalis, iodide potassium and blackberry brandy.

March 26th.—The swellings seem to be a trifle less to-day. Some improvement in bowels, also; fæces discharges not so fluid.

March 27th.—Swellings under eyes gradually disappearing; appetite good.

March 28th.—Animal quite bright this morning. Swellings entirely gone from face. Bowels quite normal.

March 30th.—I find considerable swelling under jaw, which seems to be confined principally to subcutaneous tissue. Appetite continues good. General condition very good, and is quite active to-day. Digitalis, iodide potassium and brandy continued.

April 1st.—Swellings have entirely disappeared from face and neck. Patient seems to be as well as usual.

April 4th.—Continues to improve. Animal bright and active. Medicines discontinued.

April 10th.—Animal's right arm greatly swollen, beginning at point of elbow and extending down and including fingers. The swellings uniform, pitting on pressure and painful, and several degrees cooler than left. Absence of pulsations in lower part of limb. Brachial lymphatics not enlarged. Animal refuses all food, and is greatly depressed. Diarrhœa. The arm was gently massaged and liniment applied; digitalis and iodide potassium given three times daily, in milk.

April 11th.—Still refuses all food, but is very thirsty. Swelling of arm about the same. Diarrhoea troublesome. Gave frequent doses of blackberry brandy in whites of eggs.

April 12th.—Swelling of arm less than yesterday. Took a little food to-day,—fruit, milk and egg. Diarrhoea better.

April 13th.—Refuses food; great weakness. Right arm, right leg and tail enormously enlarged, and œdematous; also swellings have appeared about face and head. Skin on under surface of tail broken and raw. Decided to chloroform, and examined immediately afterward.

Autopsy.—External lesions: head, right arm, tail, swollen and œdematous.

Heart:—Abnormal dilatation, muscle soft and flabby. Pericardial sac contains considerable quantity clear fluid without inflammatory coagula. Blood pale and semi-fluid.

Lungs:—Pigmented; numerous long filariæ attached to pulmonary pleura; many filariæ in bloodvessels of lungs, 6-7 inches in length.

Liver:—Enlarged and œdematous; numerous large filariæ coiled loosely around and along portal vein, alive and very active, none, however, being found within portal vein.

Kidneys:—Extremely pale and œdematous; capsule free.

Spleen:—Not enlarged, but congested.

Lymph Nodes:—œdematous.

Stomach:—Anæmic; catarrh.

Intestines:—Mucous membrane extremely anæmic throughout. Upon the mesentery were numerous filariæ extremely active; a great many others could be seen and felt through the smaller mesenteric bloodvessels. I pulled 8-10 filariæ from these vessels of such a large size that they seemed to almost occlude the lumen of these small bloodvessels. Attached to the posterior end of two filariæ were small irregular pale fibrinous clots the size of a pea. The longest filariæ found within the bloodvessels measured $12\frac{3}{4}$ inches in length and of the thickness of ordinary twine.

FILARIA GRACILIS (RUDOLPHI).

I am not aware that this nematode has ever before been found in this country. However, a number of preparations of this filaria are reported to be in the Museum of the Royal College of Surgeons in London.

Some of these specimens were originally obtained by Professor Owen from the pleural cavity of a Capuchin monkey, others having been found by him in the thorax of an orangutan.

The distinguishing features of this nematode are its extreme length and nearly uniform thickness throughout, only slightly attenuated at the cephalic end, the caudal extremity, however, gradually tapering for about an inch, terminating in a fine point.

Female considerably longer than the male—7 to 14 inches for the female.

All the males which I examined were under $6\frac{1}{2}$ inches. A single female has been reported over 20 inches in length.

The tail, as I shall show you by an illustration of a drawing made from life, is furnished near its extremity with three conical papillæ. The actual extremity of the tail has an exceedingly minute prominence with a centrally placed duct.

THE BUREAU OF ANIMAL INDUSTRY receives this year an appropriation of a million and a half dollars, including amounts to prevent the spread of pleuro-pneumonia, black-leg, tuberculosis, sheep scab, glanders, hog cholera, etc., including the destruction of diseased animals when necessary. The act provides that the Secretary may mark or label, in other words grade dairy products for exportation, thus giving them an established standing.

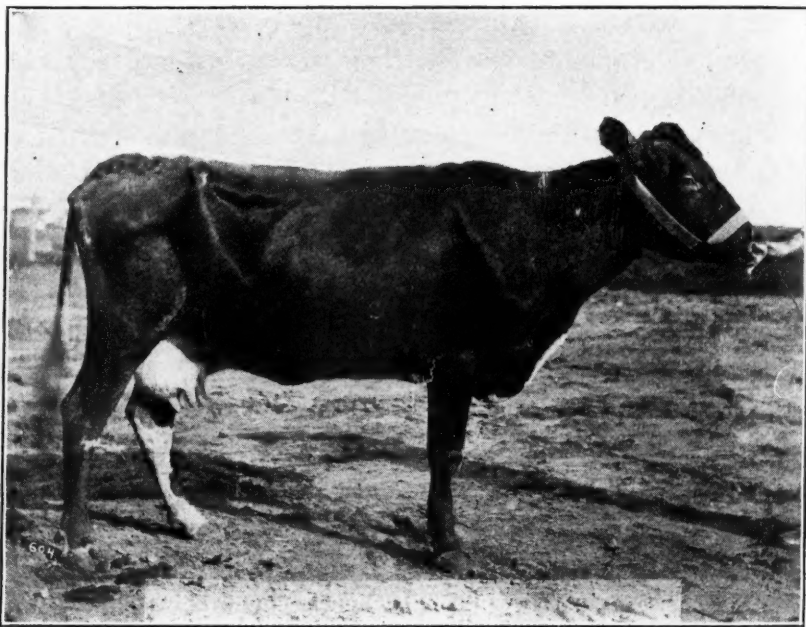
GOOD RESULTS IN AZOTURIA.—Dr. E. S. Roberts, Lewiston, Idaho, writes as follows under date of Feb. 14: "I am having good results with arecoline in one grain doses hypodermically in azoturia and flatulent colics. Have had 17 cases of azoturia in nine months past, and have not lost one case. I also use soda bicarb. in large doses for the first twelve hours, but not before I have all passages open. After using the soda I give diuretics with hot pack. All my cases have been down when called."

TUBERCULIN CORRECT.

BY M. H. REYNOLDS, UNIVERSITY OF MINNESOTA.

A cow showing a clinical picture, and history of tuberculosis, but without being tuberculous was one of the interesting developments at the University Farm during the year 1902.

This animal was a grade shorthorn cow ("Rose"), from the dairy herd. She was in poor condition, had a chronic cough and showed progressive emaciation. During her last month there was a gain in strength and activity, but she was still in very poor condition when killed, as shown in the accompanying figure. She had been tested several times with tubercu-



ROSE. APPARENTLY TUBERCULAR.

lin, but failed to give even a slight reaction. Under the supposition that she was very badly diseased, and therefore did not react to an ordinary dose of tuberculin, she was given, before killing, a very large dose, 12 c.c., or about six times an ordinary dose; but still without reaction. [See test.]

TUBERCULIN RECORD—COW ROSE.

Breed	Date	Age	Wt*	Bureau Tuberculin		Before Injection.							
				Dose	Given	8 A. M.	10 A. M.	2 P. M.	4 P. M.	6 P. M.	8 P. M.		
Grade	1901	7	950	1.8 c.c.	10 P. M.	101.4	101.7	102		101.3	102	Test unfinished.	
(1) Shorthorn	4/26	7	950	1.8 c.c.	10 P. M.	101.4	101.7	102		101.3	102		
(2)	1901	7	1100				102.3	102.3	102		102	Water 7.30 and 11.30 A. M.	
(3)	1902	8	1050	12.	" "	101.4	101.5	101.5		101.2	102		
	5/1	8	1050	12.	" "	101.4	101.5	101.5		101.2	102		

*Weights estimated.

AFTER INJECTION.

Date	6 A. M.	8 A. M.	10 A. M.	12 M.	2 P. M.	4 P. M.	6 P. M.	8 P. M.	10 P. M.	Water	Diagnosis.
(1) 4/27	101.1	100.8	101.1		100.9	102.6	101.8				Non-tuberculous
(2) 12/10											"
(3) 5/2	101.6	101.5	101.8	101.8		101.6	101.4		5.30 P. M.		"

Stable pleasantly cool during these tests.

Examination post-mortem [see autopsy] was made on May 26, 1902, and showed that several lobes of the lungs had been affected with a chronic lobular pneumonia, and for a considerable period. There was a large foreign substance in the common bile duct. This duct was greatly enlarged and the obstruction was almost complete.

There was also an interesting collection of short pieces of wire and a considerable amount of loose shot of large size in the second stomach. One piece of wire had penetrated the stomach wall, but was held from going further by coil at the inner end. There was another small hole about the size of a lead pencil, extending through the diaphragm and into the adjacent lung tissue, evidently caused by a foreign body.

The unanimous opinion of three veterinarians present at this examination post-mortem was to the effect that there was no evidence whatever of tuberculosis, although the subject had, during life, presented a perfect picture of an advanced case of this disease. There are at least two important suggestions to be drawn from this and two other similar experiences which have come under the writer's personal observation.

These are: *First*, these three cases, as far as they show anything support the well-established view that tuberculin is more reliable than any other method of diagnosing this disease, even in advanced cases. The writer does not hold that there are not advanced cases which fail to react; but he believes that such cases are less common than is supposed. The important point in this connection, however, is that tuberculin offers us not only the most but the only accurate means of ante-mortem diagnosis that is at present available to the ordinary practitioner. Bear in mind that this cow was from a herd where there had recently been plenty of tuberculosis.

The *second* important thought to be drawn from this case is, that tuberculin even in an enormous dose caused no reaction and did no harm to a cow in poor condition, for she ate, drank and moved about as usual, during the test. Her temperature was not affected, nor did the large dose produce any untoward

effect upon her health that could be observed. In fact, she improved somewhat in condition during the four weeks following this test. It will be noted in the record that she was kept under observation for about four weeks after this test in which the very large dose of tuberculin was given. In this respect the present case adds one to the list and supports the experimental work previously done at this station and the conclusions based on that work and published in Bulletin 51, "Bovine Tuberculosis."

Autopsy Record.

Cow "Rose," shorthorn grade, aged, weight about 1,000 pounds; condition poor. Tested for tuberculosis April 26, 1901; December 9th, 1901; and May 1st, 1902. All parts apparently normal except as mentioned.

Lungs.—The left cephalic, left ventral, left caudal; the first right cephalic, second right cephalic and right ventral all showed plainly the results of an old and extensive lobular pneumonia. Nothing that could give a reasonable suspicion of tuberculosis was found. One lobe contained a considerable mass of foreign substance, soft, friable and cheesy, which probably had origin in an extensive hæmorrhage.

Liver.—The ductus choledochus was greatly distended and contained a soft, cheesy mass, similar to that found in the lungs, about 40 x 60 mm. in dimensions, yellow in color and streaked with red. This substance was soft and friable. It may have had origin in a blood clot, or merely a mass of inspissated bile.

Reticulum.—This organ contained a considerable collection of wire in short pieces, nails, and large shot. One longer piece of wire penetrated the stomach wall and was held in place by a sort of coil at the end. Another hole as large as a common lead pencil, extended through the diaphragm and into one lung lobe. Evidently this latter opening was caused by a sharp foreign body which had disappeared.

It is known that of the 2,400 stallions standing in Ireland only about thirty per cent. are pure bred.

OPEN JOINTS AND THEIR TREATMENT.

BY DR. I. C. NEWHARD, ASHLAND, PA.

Read at the Semi-Annual Meeting of the Schuylkill Valley Veterinary Medical Association, at Reading, Pa., Dec. 21, 1904.

An open joint is a wound where the skin, the binding, and capsular ligaments, and the synovial membrane are ruptured, allowing the escape of synovia, and ingress for germs of various kinds that cause inflammation of the tissues, especially synovitis and arthritis. The case runs through four stages: First, a flow of pure synovia in limited quantity. Second, as the inflammation develops, the flow of synovia increases, and if confined so as to accumulate, it coagulates in the form of an amber-colored, odorless clot; the joint swells and becomes painful; fever develops; the pulse is hard and increased in frequency, the animal is restless and inclined to keep the affected limb in nearly constant motion if the trouble is below the elbow or stifle; he usually stands, becomes tucked up, and emaciates rapidly. In a few days, more pus is mixed with the discharge. Third, the articular cartilage becomes involved, suppurates, ulcerates, and becomes absorbed. The discharge in this stage is offensive and occasionally streaked with blood, the limb swells extensively, and numerous abscesses form around the affected joint, rupture, and form sinuses, the swelling becomes indurated, the animal is only able to put his weight on the foot intermittently, sometimes not at all, and dies in the course of two to six weeks. If it runs a somewhat milder course, with less swelling, suppuration and induration, it runs into the fourth stage, in which the articular ends of the bones become involved in a rarefying osteitis, with a liberal exudation of lymph, which coagulates, organizes, and ankylosis is the result, more or less ruining his usefulness, according to which joint is affected. The leg is always permanently enlarged, with considerable ossification of the inflammatory deposits.

In this disease, the temperature usually rises from one to four degrees above normal. The appetite is lost, and the bowels are constipated.

Etiology.—Open joint may occur in any joint of the body, though the stifle, knee, hock and navicular joints are most frequently affected. Very often the navicular joint is opened either directly by a penetrating nail, or by suppuration from the inflammation resulting from such an injury. Open joint may also follow a severe attack of acute articular arthritis. The most common causes are, however, traumatic injuries, such as kicks upon the joint by another animal, falling upon the knees while drawing heavy loads or in driving, or race horses while being driven at a high rate of speed. The pitchfork in the hands of an angry groom is often the cause of this disease.

Termination.—In this disease, we may have resolution, supuration, gangrene, arthritis, and ankylosis. In several cases of open joint, resolution takes place but seldom. It is much more apt to end in the destruction of the articular cartilage covering the ends of the bones, and even the vascular structures of the bones themselves are laid bare by the inflammation. As a result of this inflammation, we have an exudation of a bone-forming lymph taking place within the cancelli and Haversian canals of the bones forming the articulation, which fills up these openings and becomes organized into bone, thus binding the entire articulation into a solid mass of bone. This condition is the most common termination of an open joint. Frequently the diseased joint will become enormously enlarged by the osseous deposits which take place around it.

Treatment, to be rational, must be directed toward reducing the inflammation by removing the cause, viz., destroying the germs which have entered the wound, and allowing granulation to go on in a natural way.

The first thing to do is to remove the hair as closely as possible from a considerable surface, remove shreds of lacerated tissue if any, wash the wound with soap and water, then irrigate it thoroughly by syringing with an antiseptic lotion, such as bichloride solution, 1 to 2,000, then apply an antiseptic dusting powder composed of iodoform and alum, or iodoform and tannic acid. Then apply a good-sized pad of oakum or absorb-

ent cotton, which is held in place with an appropriate bandage. Dress it well night and morning.

If the case does not do well with this treatment, it is because the wound is not aseptic, and in such a case there is that continued motion spoken of induced by pain. Probably your wound is too small. Enlarge it with a probe-pointed bistoury, say half-an-inch each way, upward and downward, making a V-shaped opening. Irrigate thoroughly. In the mines, I often pack the joint in cracked ice several times daily until the extensive inflammation is reduced. Whenever it is practicable, render flexion of the limb impossible. This can be accomplished either by means of a splint applied to the posterior part of the leg, or by means of a plaster-of-paris bandage placed around the joint, leaving the seat of injury exposed for treatment. This, however, cannot very well be done in the hock joint. All probing and unnecessary handling of the injured parts must be avoided. You do more harm than good. Where there is much inflammation present in the joint, together with the discharge of bloody pus mixed with synovia, showing that destructive tissue-metamorphosis is going on within the joint, warm anodyne applications should be used. Very often in the early stages, where the opening into the joint is small and not much laceration of external tissues, a smart blister composed of red iodide of mercury and cantharides, stops the flow of synovia. In a case of some days' standing, where the discharge is largely pus, it will be useless to arrest the discharge from the joint. If we did succeed, it would soon break out again in some other part of the joint. At this stage of the disease, recovery by ankylosis is our only hope. I might mention that I have had good results with hydrogen peroxide injections.

Constitutional treatment consists of antipyretics, such as quinine, salicylate of sodium, acetanilid, etc. It should be given internally if the temperature runs very high.

At the beginning of the disease, the animal should be placed in slings. When the flow of synovia ceases, and the joint remains hot and swollen, resort to blistering or firing.

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REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

INTUSSUSCEPTION OF THE FLOATING COLON AND ANTERIOR PART OF THE RECTUM, WHICH PROTRUDED THROUGH THE ANUS.

By WALTER SHAW, V. S., Dayton, Ohio.

The following case is not reported because so much skill was required in its treatment, but to remind us that we are sometimes justified in treating cases which seem to be altogether incurable. About seven o'clock on October 12, 1904, Horace Justice telephoned me to come out to his farm, a distance of about six miles, to treat a horse which was suffering from flatulent colic. One hour later I had arrived at his home. The door was immediately behind the stall in which the animal lay, and upon opening it his legs fell out. One of the men was asked to go to the horse's head and pull him back in order that he might get on his feet, whereupon he replied "the horse's intestines are out and he can't get up." The protusion of the inverted colon had occurred about fifteen minutes prior to my arrival. The owner of the horse suggested that he be killed, but such a decision seemed too hasty.

Taking the lantern in my hand, and stepping over the horse, I made a careful examination, and discovered twenty-six inches of the floating colon inverted and six inches in the rectum, thus making the intussusception thirty-two inches in length—in other words, five and a half feet of the bowel was involved.

Through this telescoped colon some flatus was escaping. The animal was weak, the heart pulsations were eighty per minute and they lacked vigor.

The bowel was severely lacerated by the rough, coarse shavings with which the stall was littered; there was blood over the hind legs and the bedding.

The animal was then assisted to his feet and a careful examination proved that none of the lacerations of the colon had penetrated the muscular wall. It was then decided that the case should be treated, which was done in the following manner: The horse was given a general stimulant, antiseptic, and hæmostatic, consisting of oil of turpentine $\frac{3}{4}$ ii, creolin 3 i, fl.

ext. nux vomica 3i, oil lini 3iv. The attendants having brought two large buckets of warm water, the bowel was washed and all foreign materials were removed. The intestine was then placed in a large vessel of water, the temperature of which was 130° F.; it was kept there about ten minutes to start and establish the circulation. It was then dressed with a lotion of carbolic acid 3i, tinct. opii 3i, warm water 3xii, and it was then replaced by manipulation as follows: An attendant held the tail, I grasped the bowel in my left hand, then placed my right hand in the rectum about six inches from the point where the bowel had telescoped, then gradually commenced to replace it and when my arm was inserted to the shoulder, there was yet remaining about ten inches of the invaginated bowel by the side of my arm in the anterior part of the rectum. The fingers of the right hand were then placed in the end of the intussusception and gradual pressure applied until my arm was again in the bowel the full length, and after manipulating the invaginated part two or three minutes, the intussusception suddenly disappeared, and from the manner of its disappearance, I concluded that the reduction was complete. Into the rectum I then injected tinct. opii 3i, warm water Oi, to allay any irritation which might be present.

I left creotin 3iij, fl. ext. nux vom. 3iij, alcohol 3v; these to be made into five doses, one to be given every three hours in half a pint of warm water in the form of a drench. Directed the attendants to blanket the horse, to give him no feed but all the warm water he cared to drink.

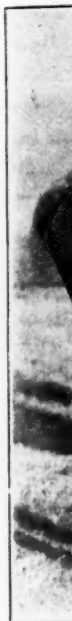
Having directed the owner to report the next morning I left the patient apparently relieved. The following day Mr. Justice telephoned me that the animal was on his feet and wanted his feed. After twenty-four hours the patient was allowed to eat two quarts of scalded bran three times a day for two successive days, then he was given a small quantity of hay for a few days, after which he was hitched up again and is to this day doing his accustomed work.

RADIAL PARALYSIS, FRACTURE, OR AZOTURIA.

By M. H. REYNOLDS, University of Minnesota, St. Anthony Park, Minn.

A large bay gelding came to the hospital October 25, with a fistula of at least two years standing, near the inferior extremities of the left 9th and 10th ribs, perhaps involving their costal cartilages.

The horse *stood idle* in the stable until the 27th, when he was



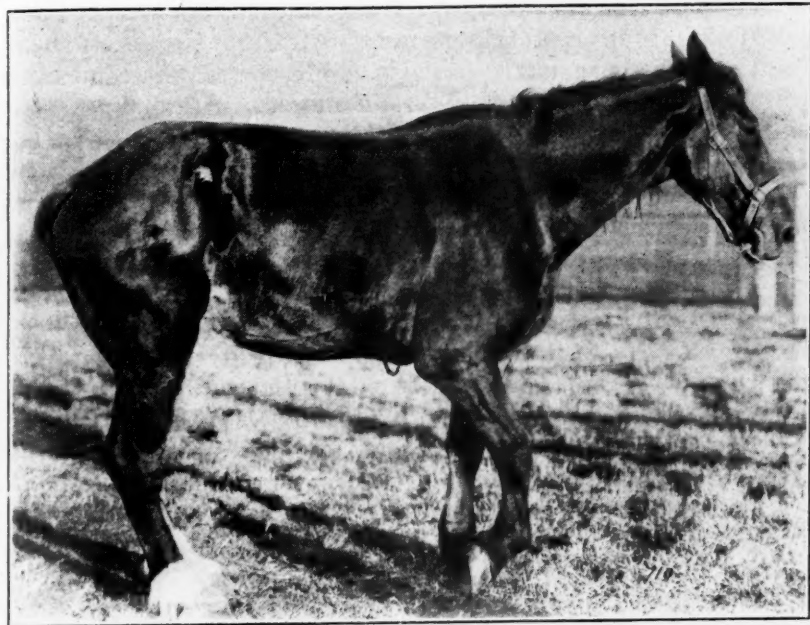


FIG. 1. HILLARY HORSE, OCTOBER 31. LEG ALMOST USELESS.

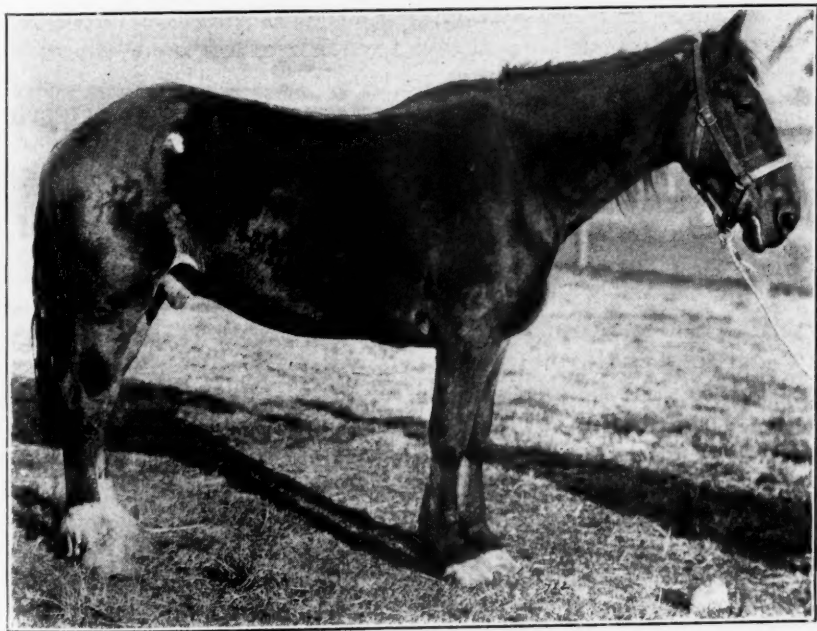


FIG. 2. HILLARY HORSE, NOVEMBER 5. RESTORATION PRACTICALLY COMPLETE.

cast on a deep bed of shavings with English hobbles, for more careful examination and operation. After operation on the fistula, the horse was unable to rise. He was a powerful horse, and had struggled violently while confined. After making several efforts, he finally succeeded in getting up on three feet. The right front limb was apparently useless and the case somewhat resembled a unilateral azoturia, except that when the limb was placed well forward and the joints straightened he could bear considerable weight on it. He succeeded in walking to the stall with some difficulty by having a rope placed around the pastern and the limb carried forward and put into position by this means. He could bear the weight fairly well as long as the limb was in position and the joints straightened.

There was no pain caused by weight pressure at this time and there was apparently a moderate dropping of the elbow. The muscles belonging to this limb were not noticeably relaxed, as in paralysis, nor tensely contracted—as in azoturia. Several attempts were made to secure samples of urine; but none was obtained. As shown by dry stall floor and failures with the catheter, there was a condition of almost complete suppression of urine during several days after the operation on October 27th.

About the fifth day after the operation it was noticed that walking seemed to cause considerable pain, and the horse was not disposed to bear weight even when the limb was placed in position, although he could support some weight on this limb if forced to do so. Up to this time there had been no evidence of pain on weight pressure and this disappeared a few days later.

On November 2d the horse was first noticed to bear the whole weight on this limb, although this may have occurred a day or two earlier.

From October 27th to the 31st the horse was able to advance the limb only with considerable difficulty and apparently almost entirely by the supra-spinatus, with possibly some aid from the long and short flexors of the forearm. This condition gradually disappeared after this date, but up to November 9th there was a slight uncertainty in controlling the limb. The horse could pick up the foot, advance it in a natural way during the latter part of this period, but if the toe happened to strike an obstruction, or if the foot was not well placed, he would stumble very easily and go over at the knee and ankle. During this period the recovery in the use of the limb was very rapid.

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and place forward the foot quite easily, but seemed a little uncertain. The horse had lost but little weight.

During the period between October 27th and about November 1st the horse was unable to extend the forearm, and all of the extensor muscles seemed to be quite useless.

Five veterinarians saw this case and agreed on these three distinct diagnoses. The case was seen on the fifth day only, the day of pain on weight pressure, by the gentleman who diagnosed "fracture involving the humero-radial articulation," with prognosis bad. On this particular day the case certainly did look like a fracture. And this gentleman is a man of years of experience and one of the ablest practitioners in the Northwest.

One suggestion from this experience is, that the veterinarian should see enough of his case and be as certain as possible of his footing before making diagnosis, prescribing treatment or making prognosis.

ACUTE LARYNGITIS, DUE TO MICROBIC INFECTION.

By W. T. CAMPBELL, D. V. S., Cheviot, Ohio.

Having practiced in a locality where nearly all the pulmonary diseases are common, and coming in contact with a class this fall which was new to me, I thought it might be interesting to some of my professional brethren.

The last two seasons have been very dry and water in most parts has been very scarce, and stock were watered at the creeks and springs, which, being nearly dry, did not contain the purest of water.

Along the latter part of October I began to get a number of cases of acute laryngitis without any apparent cause. All seemed in great pain and would not improve with my former treatment of such cases, and in summing up matters I knew I had a disease I had never before had occasion to treat.

The first symptom would be a dry harsh cough with a temperature of 104.5° ; loss of appetite, staring coat, eyes dilated and mucous membrane reddened, a very distressed look about the head, and dry hard fæces, with urine scanty and high colored.

After trying everything I knew without any success at stopping the cough, and knowing the value of Glyco-Heroin (Smith) in such cases, also the fact that the animals were in great pain and much distressed, I concluded to give same a trial, which I did, with great success, as the following cases will show:

A grey gelding was brought to hospital which had been

coughing nearly a month, he having had an attack of distemper, and had been stabled in camp tent; had been watered at the creek and, not being able to work, was turned out on the commons. He had been treated at tent for two weeks when ordered to my hospital. I rubbed his throat with a stimulating liniment and gave him one ounce doses of Glyco-Heroin (Smith) every two hours for two days. On the third day a marked change was noticed and he was given one ounce three times a day before feeding, and in a week's time he was able to resume work, the cough having left him entirely.

Another case was that of a cow I was called to see, which had been in pasture and had been getting water from a spring which was nearly dry. When I first saw her she was hardly able to breathe, with a temperature 106° , pulse full and strong, appetite gone, coat rough and staring, with a very depressed look about her head. I ordered hot blankets, plenty of straw in a loose box, with a mustard draft to the neck and ounce doses of Glyco-Heroin every two hours. On the following day the temperature had decreased, cough not so often, but still no appetite, which, however, returned the third day, when I ordered hot bran mash, and decreased the number of doses to three times a day. From this time on she did very nicely, and on the sixth day I left her, after having advised owner as to water, etc., she having regained her milk to its former quantity.

On Nov. 20, there was brought to the hospital a brown horse who had been working in a log wagon, and it was the habit of the driver to water his horses at a creek which ran through the woods, as it was impossible for him to get water any place else until he got home. The horse was suffering from an attack of acute laryngitis, and was in severe pain every time he breathed. He had a dry harsh cough, temperature $105\frac{1}{2}^{\circ}$, pulse full and strong, his coat very rough, his nostrils dilated, ears cold and drooped. I gave him a good steam bath, followed by a good rubbing out and had him put in a roomy box. I applied a stimulating liniment to the throat and gave him an ounce and a half of Glyco-Heroin every two hours. On the second day his appetite came back and he was given a good warm bran mash. His temperature on the third day was nearly normal, his cough had decreased in number and was less painful. He was put to work on the ninth day and has been at work ever since, his cough having left him entirely.

About the same time I was attending this horse I was called to the kennels of Mr. Chas. S., who stated that all his beagle

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hounds were affected with a very severe cough, which seemed to get worse every day. The runs of his kennels cross a small creek and he used same to water his dogs. On examining dogs I found all in about the same condition, viz., eyes reddened, heavy breathing, temperature increased, appetite gone, hair roughened, with a dry harsh cough. I had the dogs all housed up, changed the water and gave each half an ounce of fl. ext. cascara sagrada, to be followed every two hours with a teaspoonful of Glyco-Heroin. The second day found them much improved, as all had regained their appetite, and in five days all were well and able to go out.

A bay gelding was brought to the hospital Dec. 15th and owner said he had been coughing for the last month, and had lost his appetite or "could not eat," as owner said. He had given horse medicine, but it did not have any effect, in fact, he said, made him worse. The horse had been kept in a good dry barn, with plenty of good feed, but had been watered at a creek. His throat was swollen, eyes inflamed, temperature 106°, with a dry harsh cough, in weakened condition, and hardly able to stand. I had him put in a good roomy box, bandaged his legs, and put on a warm blanket. I ordered doses of Glyco-Heroin, one ounce, to be given every two hours, good warm mash, with plenty of body rubbing, hot fomentations to legs three times a day, with continued use of bandages. On the second day I gave a mild stimulant, and had throat rubbed with liniment and reduced Glyco-Heroin to three times a day, as pain had ceased, and his cough a great deal better. He was fed on two feeds of warm mash and one of boiled oats. On the fourth day his temperature decreased to 104, on the fifth to 102 and on the eighth day his cough was checked. He was at hospital for two weeks, and when turned over to owner was sound and well, and in good condition, and has been since.

A contractor who had been working on railroad brought to the hospital a span of mules, each of which was suffering with a severe cough. Both had been coughing for a month. At first it was only a slight cough, but would notice it getting worse every day after watering. As the railroad ran along the bank of the creek he watered his stock there. The cough in both cases was very harsh and both had a very distressed appearance; eyes inflamed, ears cold and drooped, throat swollen and very painful, and difficult breathing. The temperature was 104½° 105°, and neither had eaten for two days. I gave each a good steam bath, with good rubbing, then had them blanket-

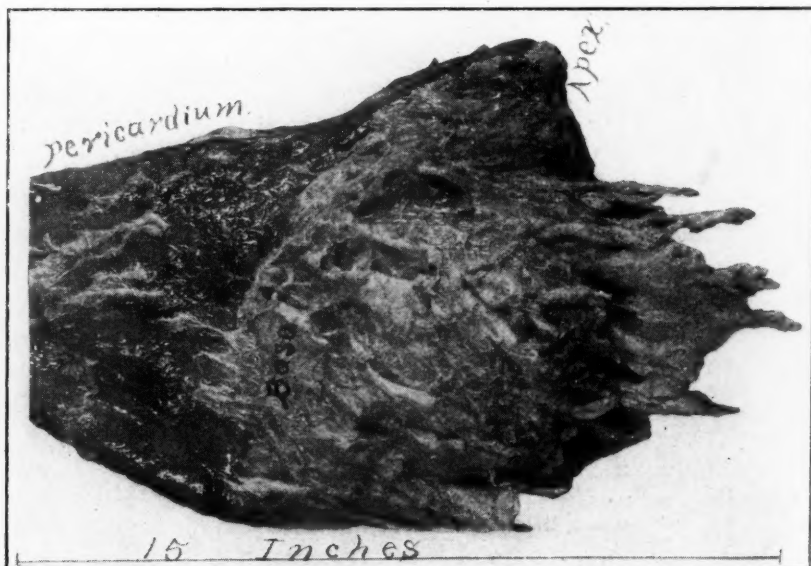
ed and warm bandages applied to the legs. I put them in boxes and gave each a pint of linseed oil, followed by one and a half ounces of Glyco-Heroin, this being given every two hours thereafter. On the second day both mules began to eat and a warm bran mash was given three times a day. After the third day I gave the Glyco-Heroin three times a day for one week, when they were turned over to their owner and he has worked them every day.

These are some of the cases which I thought would be of interest. Of course, during this time I met with lots of cases of laryngitis from different causes, but these seemed to have but this one cause, that of drinking bad water. Now, my opinion is this disease was caused by microbic infection, obtained in the drinking water, as I have never seen horses show so much distress and pain in acute laryngitis as these did.

TRAUMATIC PERICARDITIS (?) IN A BULL.

By HUGH S. MAXWELL, V. S., Salina, Kansas.

The accompanying picture will show a heart taken from a sixteen-months-old registered Shorthorn bull. This bull was loaded on the cars at Lawson, Mo., by his owner, Mr. R. A. Ford, on or about Dec. 12, 1904; was shipped to Nebraska, loaded and shipped from there to some point in northern Kansas; then in a few days was again loaded and shipped to Salina,



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where he was sold to C. C. Hahn & Son on Jan. 7, 1905. When he was led into the sale ring Mr. Ford said that this bull was seemingly a little sore from being shipped around so much ; was not looking just as good as he should, and that when bought he should be taken home and turned out where he could get some exercise ; he would then be all right, as he was a very thrifty fellow. "At home he is all right, and I will guarantee him to be all right." The bull was led home on the following Monday morning, Jan. 9, a distance of $6\frac{1}{2}$ miles. He was seemingly a little more sore than on the previous Saturday. So Mr. Ford told Mr. Hahn the bull was off his feed. When the bull reached his destination, being led by a man on foot he laid down and refused to eat. When made to rise he would hold his body stiff, would drink a little, and only nibbled at his feed. On the following Sunday, Jan. 15, I was called to see this bull. I found him lying down, breathing hard, and grunting considerably at each breath. I had neglected to take my thermometer, so do not know his exact temperature, but noticed some rise in temperature. Could not detect his pulse, but on listening to his heart it seemed as though there were three beats, one gurgling and two hard thumps.

He was very costive. I gave him a rectal injection of two gallons of soapy warm water, with one pint of oleum lini. He passed considerable fæces, about the size you see from sheep, and extremely hard, covered with blood and mucus. I left the usual treatment for enteritis and asked Mr. Hahn to phone me next morning the condition of the patient. His message conveyed the news of the death of the bull, as follows: At 8 P. M. Mr. Hahn was in the barn bedding some of his fine cattle ; he put a fork full of bedding under the bull, turned to go into the next stall to bed down a heifer, when the bull died, not even moving a foot—making no movement at all.

Monday, Jan. 16, I went down to hold a post-mortem. I found the small bowels somewhat inflamed ; the omasum and abomasum were in fair condition ; the rumen seemingly all right ; the reticulum was adherent to the diaphragm. I then examined the point of unison for foreign body, but found none. The pericardium was attached to the diaphragm at the same point as the reticulum. On opening the pericardium at least two gallons of a thin yellow fluid ran out. The pericardium was a half inch thick. Covering the heart was a growth of a fibrous character, an inch thick at the base of the heart, and gradually tapering till it was not over a half inch thick at the

apex. The heart muscle was very pale, showing lack of blood supply. Every cavity of the heart was full of blood. Covering the heart, extending from the heart, there were strings of a fibro-fatty substance. The heart and pericardium weighed 12½ pounds, as it hangs in the accompanying picture.

I would like to hear the opinions of some veterinarians as to how long this animal had been affected, and what the trouble was. Is it pericarditis, or fatty degeneration? The heart itself seemed atrophied. I showed this heart to physicians; some said it was fatty degeneration, while others called it pericarditis. This is my first of this nature.

[NOTE.—In answer to Dr. Maxwell's call for professional judgment on the condition of the heart and its appendages found at the post-mortem, we are of the opinion that the bull suffered from traumatic pericarditis, a pointed object having passed from the reticulum, through the diaphragm and into the pericardium. It may have been a small object, and was not found in the extensive lesions produced. The remarkable point in the history occurs in the absence of serious symptoms until such a short time before death, as the inflammatory lesions must have been in process for a month or more.—EDITOR REVIEW.]

MORE EXPERIENCE WITH PARTURIENT PARESIS WITH RECURRENCE OF SYMPTOMS.

By E. D. SMITH, V. S., Cleveland, Ohio.

Having read in the February issue of REVIEW Dr. Pence's article on parturient paresis, and passing through a similar experience, I take the liberty to add my little mite.

I have treated in the last year seven cases of parturient paresis. Two with pure oxygen and five with air. Lost none.

Those treated with air were on their feet in from one to three hours, those with oxygen four and six hours.

My first case, I was called to a Mr. Osborn's at nine P. M., found a grade cow which had calved 18 hours previous, down and almost out, with characteristic symptoms of death and parturient paresis. There being a dangerous tympanites, I immediately tapped her, while the owner was emptying and cleansing udder. Next I inflated udder with air, evacuated bladder and rectum and placed cow well on sternum. No medicine. Left cow for the night. Owner called up at midnight, said cow was up and apparently as well as ever, but wished me to call in the morning to make sure that everything was all right. At 6 A.

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M. found cow in normal condition and discharged case. At 5 P. M. same day owner called up again and informed me that the cow was down and thought she would be dead before I could get there. I beat the owner's prophecy by a few minutes and at once inflated cow's udder with air and gave hypodermic $\frac{1}{2}$ grain strychnine sulph., and in less than two minutes got the toxic action of the drug, which passed off in about 15 minutes, much to the relief of myself—and also my patient. I was suspicious that the owner had exceeded my orders in some way, and thinking that his wife might throw some light on the doings of her husband the past 24 hours, I interviewed her, which resulted in the fact that since my first call all her husband had done was to stay out in the barn and try and get milk out of the cow's udder, not even giving the calf a chance, and persisted in his efforts until the cow went down the second time. Was the return of symptoms due to the owner's efforts?

The cow was up again in three hours ready for food. I cautioned owner to take calf away from cow and not disturb udder for 12 hours and then only milk lightly until the milk secretion was fully established. No more trouble.

One of the first symptoms we get in parturient paresis is a large indurated udder with a scanty secretion of milk, which I would suggest indicates that the milk glands and udder are in a high state of congestion and not able to perform their natural functions, and the more you irritate the udder by milking and the bunting of the calf, until there is a natural flow of milk (which in my experience is not until the third day), you are simply adding fuel to fire. Contrary to the laity's belief, I think the stimulation of the secretion of the cow's milk originates within the cow instead of the bunt of the calf.

Since keeping calf away from udder and milking but little until milk fully starts, I have had no further return of symptoms. I think internal medicine dangerous and excess of treatment, especially strychnine, it being too active a stimulant for the conditions met with, and that the paralysis will subside when the cause is removed, which pure oxygen or air will effectually do in from one to six hours if there has been no medicine given.

I notice that some of my colleagues are in the habit of ligating the teats to prevent the escape of oxygen. (The ligatures, by the way, setting up a constant irritation.) If you will pinch vigorously with your thumb and finger for a few seconds the extremity of each teat you will find that the

sphincter muscle will contract on itself and prevent the escape of oxygen after the tube is withdrawn.

CÆSAREAN OPERATION IN A BITCH.

By C. S. MOORE, V. S., Danvers, Mass.

On Jan. 5, 1905, Mr. Hugh Healy, of this town, called me at 8 P. M. to see his Boston terrier bitch, and said to bring instruments. On arrival I was informed that the bitch had been trying to whelp for twenty-four hours. Examination revealed foetus presenting at the pelvic outlet. Forceps applied and found that it was impossible as the diameter of the pelvis was too small. I then applied a noose made of twine around the foetus, and tenaculum in lower jaw, with negative results. I then explained to Mr. Healy that it would be impossible to deliver her by any other method than operation. He, which is quite natural to all owners, wanted to wait until the next day. However, at 9 P. M. he decided to have operation. I took the animal into my laboratory, prepared her in the usual way for such abdominal operations. Anæsthesia given, incision made on median line, cutting through the skin and muscles. Peritoneum ruptured with tenaculum. Uterus drawn out. Sterile towels packed under uterus, filling the abdominal cavity, thus preventing escape of the intestines and absorbing blood or any liquids that might escape. Incision made through the uterus large enough to remove foetus, two being taken out with membranes. Soft sterile towels inserted into uterus until thoroughly dry. Uterus closed by edges being rolled inward with continued cat-gut suture. Peritoneum and muscle closed in the same way. Skin closed with interrupted silk suture. Abdomen washed with saline solution, covered with iodoform gauze, absorbent cotton and bandage. On Jan. 6th, at 9 A. M., pulse, respiration and temperature normal. Jan. 7th, animal normal, bandage removed and wound washed with creolin solution each day. Jan. 11th, visited the animal, removed stitches, wound nearly healed. Animal fed twice daily with sweet oil, milk and oatmeal. Told Mr. Healy that it would not be necessary for me to call again unless the animal presented some condition other than normal, and if so to bring it to my office.

I am of the opinion that it would be possible, if the operation was performed early enough, to save both mother and offspring.

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of you. I have been in practice since 1891. Have operated several times, and each time the animal died within twenty-four hours. I was satisfied that the reason was that the animal was in a state of collapse and the foetus beginning to decay.

I hope that you will pardon all technical errors, as this is my first attempt at reporting a case to a journal.

A UNIQUE CASE REPORT FROM FAR-OFF TASMANIA.

By E. A. WESTON (Graduate Melbourne Veterinary College), Launceston, Tasmania.

I thought it might interest you to know that your journal had reached even to far-away little Tasmania, where I am I believe the only qualified veterinary surgeon in active private practice. To cement the introduction I enclose the history of a rather unique case.

The subject was a six-weeks-old cart foal, which for the first fortnight of its existence showed nothing amiss. About this time, however, he began to discharge from the nose, appeared slightly swollen about the jaws, and did not seem to be thriving well. A neighbor whose advice was sought recommended blistering the throat with vinegar and mustard. This treatment appeared to benefit the patient for a few days, but after this his owner noticed that when the foal drank for a few seconds all the milk ran out of his nostrils. He continued in this condition for about a month, some days seeming to drink better, but on the whole growing steadily worse. He would visit the creek, and stand with his nose immersed in the water, as though he longed to drink, but could not. About this time I was called in, and was informed that the foal could not swallow. In order to test the correctness of this statement I drenched him with some water, which he swallowed eagerly until about half a pint had been taken, when with a convulsive contraction of the inferior cervical muscles he vomited the whole lot in a stream from his nostrils, some of it passing down the trachea, and producing great distress for a few minutes. I now suspected some obstruction in the thoracic portion of the oesophagus, so threw my patient, placed a gag in his mouth, and carefully passed a small probang, which, however, entered the stomach without meeting with any obstruction. Stranger still the passing of the instrument did not appear to cause the foal any pain or inconvenience. I again tried drenching with water, only to find the same eager swallowing followed by rapid expulsion. I told the owner that there was either an obstruction in the duodenum im-

mediately posterior to the pyloric orifice, or else there was an irritable, inflamed, and possibly ulcerated condition of the gastric mucosa, and that I would advise the patient to be treated on the latter supposition. The following prescription was accordingly prepared: \mathcal{R} Opii pulv. gr. xvi, ac. hydrocyanici B. P. \mathbb{M} x; creta prep. \mathfrak{z} i, soda bicarb. \mathfrak{z} ij, glycerine and aquæ ad \mathfrak{z} i. M. Ft. haust., one dose. I ordered this administered three times daily in a little linseed tea. Thirty-six hours after my visit the foal died, and I rode out ten miles to make a p.m., as I was very interested in the case. A careful examination of the pharynx failed to reveal anything, but on slitting up the œsophagus I found a black patch about two inches from the pharynx, and in the centre of this was an ulcer which had penetrated the mucous coat, and gone some depth into the muscular. The stomach, bowels, liver and other organs were perfectly healthy, and the vomiting was undoubtedly a reflex nervous action resulting from irritation of the ulcerated œsophageal lining caused by the liquid flowing continuously over it. This is the more strange, as, according to Fred Smith's Physiology, "We are bound to suppose that the vomiting centres in the medulla of both horse and ox are either only rudimentary or very insensitive to ordinary impressions." Does this apply to the young of these animals?

COLLARGOLUM IN THE TREATMENT OF CELLULITIS AND ALL SEPTIC CONDITIONS.

By R. H. STEVENSON, V. S., Sigourney, Iowa.

As there is no literature on the use of collargolum that I know of in the veterinary profession, and being much impressed with the good results I have obtained with the use of the drug, I feel it my duty to state a case or two that I have used it in.

July 5th last I was called to see a brown gelding, seven years old, pulse 65, temperature 102°, respiration 25, legs swollen to knees. Diagnosed incipient influenza. Left regular treatment. Was called again on the 9th and found the horse with all legs swollen to body; swollen across abdomen three inches thick, nose swollen nearly up to eyes; all symptoms aggravated. Could not make horse move. Could hardly diagnose morbus maculosis, as the swelling was regular and the horse had been running in pasture and was in very fair condition.

Treatment: I injected \mathfrak{z} xij of a 1% solution of collargolum in the jugular vein at one o'clock P. M. Left more medicine,

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3i to be given in bottle of water every six hours. Went back on 11th at noon, 48 hours from first treatment. The swellings had all disappeared, except a little at knees and hocks. The recovery was so quick that it induced me to go farther. In short, will say that I have used it in all cases of cellulitis, let it be located where it will; abscesses, fistulæ, influenza in all its different forms, in fact, in all septic processes, locally and internally, with the same results. The quickest results are obtained by intravenous injections, which are very easy to do. The drug appears to be harmless. Colloidal silver is rather a new remedy, especially in this country, in human practice. It is so good in that, I find it just as good in veterinary practice. I believe it is going to be one of the best therapeutic agents we have.

THERE are 240 students attending the Kansas City Veterinary College this year.

AN OLD WAR HORSE.—These old horses never forget the calls, no matter how long it has been since they last heard them. One day some years ago when I was passing an open lot in the outskirts of Chicago I found a boy trying to flag an old cornet. While the boy and I were at work on the cornet, an old negro ash hauler came along driving an animal that had once been a good horse, but was now only a collection of skin and bones. The horse stopped when he heard us, and stuck up his ears. I came to the conclusion that he had once been a cavalry horse, and asked the old negro where he had got him. "From a farmer," he said. I could not find a "U. S." on the horse; he had probably been discharged so long ago that this brand had been worn off. But taking the cornet I sounded the table call, and the horse began to dance. "Hold fast to your lines, now, Uncle," I warned the old negro. "I am going to make that old horse do some of the fastest running he has ever done since he left the cavalry." Then, beginning with the call for the gallop, I next sounded the charge, and the old plug went plunging up the road at his fastest gait, dragging his wagon after him. I gave him the recall next, and he came down to a walk, much to the relief of the old negro. He said that this was the first time he had ever seen the horse run. He had never been able to get him to go faster than a slow walk before. "You don't feed him well enough to get him to do much running," I told him. "That horse, when he did have to run, got his 12 pounds of corn and all the hay he could eat every day."

EXTRACTS FROM EXCHANGES.

ITALIAN REVIEW.

By Prof A. LIAUTARD, M. D., V. M.

SHORT PRACTICAL OBSERVATIONS [Dr. Arnaldo Fumagalli].—*Fibro-Sarcoma in Ruminants*.—A steer taken with tympanites was rumenotomized by a country fellow, who used a big knife and made an incision about six centimetres long. A few days after the author was called and noticed that the edges of the wound were irregular, of bad aspect, and a greenish fluid escaped with the food on the sides of the animal. He attended to the wound, sewed it with interrupted sutures, involving skin, muscles and rumen, and prescribed disinfecting lotions. In a week the animal was almost well and began to take on flesh. A short time afterward the man who was taking care of the steer observed around the old cicatrix subcutaneous nodosities of various sizes and not adherent to the skin. A few being excised they were examined under the microscope and found to be sarcomatous. They were growing quite numerous, began to annoy the animal, which became nervous and lost its appetite. It was sent to the slaughter-house. With the exception of six large growths the steer was in perfect condition. *Large Vesical Tumor*.—A seven-year-old cow shortly after having delivered begins to show signs of irritation; she frequently kicks with her hind legs as if about micturating, but this function is rather painful; defecation is also difficult. She was killed. All her organs were found in good condition except the bladder, which near the neck presented a large fibroma, cause of all the trouble—difficult urination, pain and irritation of the animal. —(*Clinica Vet.*, Oct. 22, 1904.)

ONICOMICOSIS IN ANIMALS [Prof. A. Baldoni].—Known under various names given by those who have studied it, onicomicosis, onychia (seedy-toe in plain English), has been the object of investigation at the hands of many and the parasitic form of the disease has given rise to many interesting communications. Recognized as almost special to the foot of solipeds, there are cases, however, on record of its presence in cattle. According to the various authors that have written on its parasitic origin, the *Achorion kerathophagus*, *Tyroglyphus echinopus*, *Cæpophagus echinopus*, and *Trychophyton gigas*, have been

mentioned. The author records two cases which came to complete the history of the disease. The first he observed in an elephant which had the toes of both fore feet affected. In the second he noticed it in a barn where several cows were kept and four of them had the disease. In all his cases Prof. Baldoni has found the *Achorion kerathophagus*.—(*Clinica Vet.*, Oct. 29, 1904.)

GUTTA-PERCHA IN THE TREATMENT OF ONICOMICOSIS [Dr. B. Michele].—Having one case of this affection to treat in a horse suffering on the external quarter of the anterior biped, the author after removing the loose horn and thoroughly disinfecting with a 2 per cent. solution of lysol, covered the part with iodoform, over which a wide sheet of impermeable rubber was applied, kept on by ordinary bandage. After 40 days of this treatment, renewed according to the condition of the parts, the wall of the foot recovered to such extent that the animal could be returned to work. But after two months the trouble had all returned, brought about by the filth of the street as well as by the bad condition of the foot. The same treatment was recommended, but after some ten days, when the nails had resumed a better aspect, the two cavities were filled with gutta-percha, which allowed the application of the shoes and fitted the horse for its work. Since this case the author has used the same application of gutta-percha, and always had good results.—(*Giornale della R. S. and Acad. Vet. Ital.*, Oct. 22, 1904.)

A CASE OF PSEUDO-TUBERCULOSIS IN A BUFFALO [Dr. Angelo Padrone].—In making his inspections at the abattoir of Naples, the Doctor had his attention called to lesions, which in a long experience as inspector he never had seen in carcasses of buffaloes. The bronchial glands were enlarged, of oval form, and when one was cut in its centre it had a peculiar aspect. The glandular tissue was atrophied, and replaced by nodules of various sizes, whitish in color and of calcareous consistency. On the external surface of the lungs there were indications of dry pleurisy and in the pulmonary structure nodules having the same characters of the bronchial glands, were found. Three others similar to those of the lungs were found in the liver. The other organs were healthy. Examined under the microscope, however, the glands and the nodules were not recognized of tuberculous nature, the bacillus not being present, and in its place numerous cocci and diplococci, which had given rise to a pseudo-tuberculosis.—(*Giorn. della R. S. and Acad. Veter. Ital.*, Oct. 22, 1904.)

DIAGNOSIS OF RABIES BY NELIS' METHOD [*Dr. Beliger*].—The author has published an interesting article upon 37 animals, 30 of which have died certainly with rabies. His conclusions were as follows: (1) The Nelis method allowed a quick diagnosis of rabies in all the dogs that died with the disease or were killed during its development. (2) In horses, cattle, goats and swine, the alterations in the ganglions are less marked and the diagnosis can be certain only when the animal has died with the disease, but not if he has been killed. (3) The superior cervical ganglion has a diagnostic value only in dogs killed during the infection; in those that have died and in the other animals, the ganglions of the neck must always be examined. (4) The alterations are found on both sides of the neck. (5) Alterations of the ganglions in rabies begin not by a proliferation of the endothelium of the capsules of the nervous cells, but by an infiltration of the connective tissue of the ganglionic cells. This infiltration is always present in dogs as well as in the other animals. The proliferation of the capsules of the nervous cells is the consequence of the atrophy of those cells. (6) The extent of the alteration of the ganglions is due to the idiosyncrasy and not to the intensity of the disease. (7) For the examination a microtome with freezing apparatus and hematoxylin are necessary. (8) Fresh cadavers, the head, nervous ganglions, kept in alcohol or in concentrated sublimate solution, are used. (9) The presence of the alteration of the ganglions is a positive sign of the diagnosis of rabies. (10) For a better diagnosis, it is better to wait for the death of the animal. (11) In healthy dogs and those that are free from rabies the alterations described by Nelis are missing.—[*Clinica Veterinaria*.]

CEREBRAL MANIFESTATIONS IN ANTHRAX [*Dr. Eugenio Nicoletti*].—These are rather rare. One day the author in making inspection of meat observed the carcass of a cow which evidently had not been slaughtered, but had died naturally. He tried to make a diagnosis by macroscopic examination, but the spleen was not to be had; all the information that could be obtained was that the cow was at work, when she was suddenly taken sick; that she acted as crazy, grew worse rapidly, and was killed on the spot. All of this history, the aspect of the meat, that of the blood, which was black, sticky, and did not coagulate, brought the doctor to the conclusion that he had a case of anthrax, and he condemned the meat. Shortly afterwards he was requested to inspect a calf of three months, also

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killed because of having acted as crazy (?). Anthrax was again suspected and bacteriological examination was begun. In the meanwhile it was found that the calf was taken ill, refusing food, salivated abundantly, ground his teeth; the skin had become very rough and the calf acted wildly; he was turned out in a field and then began walking in a circle, turning to the left with the head turned on that side. The veterinarian that attended him thought he had cœnurus and asked to have the head examined, but nothing was found except congestion of the meninges. At the inspection of the viscerae the spleen was found longer than usual, not much bigger, and on section let out a liquid sticky blood, similar to that found in the heart. It did not coagulate. The meat was very dark. A diagnosis of anthrax was made, similar to the first one, but which then was confirmed by the presence of numerous *Bacilli anthracis*, when the blood was examined under the microscope.—(*Il Nuovo Ercolani*, Sept. 15, 1904.)

A CASE OF DRUNKENNESS IN A HORSE [*Dr. Cottide Fabretti*].—Some horses like wine; that is known; but this case is interesting to the pathological point of view, and as far as the use of wine goes in therapeutics. A man had a horse which liked wine, not bread soaked in the red juice, but the liquor itself. One day his owner, who did not like the juice of the grape, stopped at one place in the country; some friends made up their minds to get the horse drunk, and allowed him to drink such a quantity that they succeeded, and when the owner started to go on his route with him, he had a queer exhibition of symptoms. The horse refused to go, did not answer to the vocal urgings or to the whip; he stopped, staggered, moved with great difficulty, and fell. His physiognomy was sleepy. The owner finding out what his friends had done, applied cold water to his drunken breast, especially on his head; allowed him to sleep off his wine, and after two hours was able to resume his journey with his sober horse. After giving this brief report the author says that he found out that the poor horse had had not less than three litres at one time. Wine is resorted to as a therapeutic agent, and if a little is good, too much may do harm. One litre must be the limit to give to solipeds; large ruminants may receive two litres at one dose, but it is better to divide it in two. Of course one must be guided by the effect obtained and act accordingly.—(*Giornale d'Ippologia*, Oct. 5, 1904.)

GERMAN REVIEW.

By ADOLPH EICHHORN, D. V. S., Bureau of Animal Industry, Thayer, Mo.

DIRECTIONS TO THE CHEMICAL DIAGNOSIS OF URINE EXAMINATIONS IN VETERINARY PRACTICE [*Prof. Dr. Gmeiner*].

—The urine analysis for the purpose of veterinary practice is chiefly conducted to determine the presence of albumen, hæmoglobin and sugar. The best method for testing for albumen is the boiling test with the adding of nitric acid. The urine is filtrated and about 5-7 c.cm. of it is boiled in a test-tube; to this is carefully added one drop of concentrated nitric acid, awaiting the development of carbonic acid and then successively altogether 10 drops of the acid is added. In the act of boiling the calcium and magnesium bicarbonate and biphosphate are changed to carbonic acid and monocarbonates and phosphate, the latter, also mucin and like substances to mucin will form a precipitate. Through the adding of the acid after boiling the same is again dissolved, while an insoluble precipitation proves the presence of albumen. If albumen is present in 0.1-1.5 per cent., it forms at first a yellowish white flack, which changes into a dirty brown color. If present in 2 per cent. or more it forms immediately a fixed mass. This test is satisfactory in determining the presence of albumen, even if only present in 1:20,000. For the test of hæmoglobin it is advisable to apply a modification of the Shoenbein-Almen test; the test-tube is filled to one-fourth with filtrated urine acidified with acetic acid, to which a layer of a finger thickness of tincture of guajaci is added, and also the same amount of old ozonized oil of turpentine; the whole is then thoroughly shaken, and the test-tube is placed aside. In a short time a pretty blue color indicates the presence of hæmoglobin. This extremely delicate test is due to the ability of oxidation of the hæmoglobin, which it extracts from the ozonized oil of turpentine, which again oxidizes the guajaci rosin, and thereby obtains the blue color. For the sugar test an appropriated modification of Trommer's test is used; the urine is tested for albumen and at first the filtrated, and from albumen freed urine is used for the test. With this, one-third of the test-tube is filled, and a solution of copper sulphate is added drop by drop; after each drop it is well shaken, until the liquid ceases to dissolve the last added drop, but takes up a dim color. Then by holding the tube in a slender position, the upper third of the solution is very slightly heated, in which pro-

cedure care should be taken not to bring the test-tube in direct contact with the flame, so as to prevent boiling. If orange red, thick non-transparent clouds of copper-oxydul are precipitated, the presence of sugar is demonstrated. This reaction is typical even if sugar is present only in 0.2 per cent. quantities. The fermentation test, which is next to Trommer's test the most reliable, will indicate the presence of sugar in quantities of 0.05 per cent. Ten c.cm. of filtrated and otherwise unprepared urine is taken, to which a small piece of fresh yeast, diffused in a small quantity of water, is added (wash the yeast before using in distilled water), and mixed in a test-tube; with this Einhorn's fermenting saccharometer is filled, and after closing the same, is laid in a warm place for 24 hours. If sugar is present it will be fermented through the yeast, the formed carbonic acid will ascend to the top of the longer arm of the saccharometer, and presses the liquid gradually downwards. As the quantity of gas is in proportion to the fermented amount of sugar, this can be easily read from the graduated tube. The reagents required for these tests are the following: 1. Acidum nitricum. 2. Acidum aceticum. 3. Liquor nat. caust., to be kept in bottle with rubber stopper. 4. Tinct. guajaci (crumbled guajaci rosin is extracted with alcohol (1:17), left over night and filtrated the following morning. The tincture, if possible, should be made fresh, and preserved in a dark bottle). 5. Ol. terebinth (old, ozonized). 6. Cupri sulph. (10 per cent. in dist. water).—(*Berl. Thierarzt. Wochenschr.*)

A CASE OF AMPUTATION OF THE UTERUS [*Alexandrow*].—The patient was brought before the author with a prolapsed uterus; the affection occurring a week before. On account of its œdematous swelling and dark discoloration, an operation of amputation of the uterus was decided upon. After applying a ligature of a thin cord on the cervix uteri, the uterus was removed. The resulting hæmorrhage was treated with tampons moistened in liquor ferri sesquichlorat. The neck of the uterus was not replaced, so as to facilitate its washing with a carbolic solution. The cow showed no signs of diminished appetite or thirst. The neck of the uterus gradually returned to its place, but only after a considerable length of time. The cow was sold the following year in excellent condition for slaughter.—(*Vet-erin. Feldsch. Westnik.*)

A NAIL IN THE LUNG TISSUE [*Sturmann*].—In a well-nourished cow the author noticed complete anorexia, with constant desire for laying down. The animal groaned, and on the

whole surface of the body, especially nearer the back, was a pronounced crepitation from the accumulated air. It was suspected that with the food a sharp object entered the stomach, working its way into the lungs, and by penetrating the same, the air escaped, filling the subcutaneous tissue. The cow was destroyed and a nail was found in the lung tissue.—(*Veterin. Feldsch. Westnik.*)

THE COMBATING OF TUBERCULOSIS IN DENMARK [*Dr. Stoedter*].—In Denmark, October 1, 1904, the following measures were put into effect regarding the prevention of the spreading of tuberculosis. The Department of Agriculture receives in connection with the enforcement of this law an appropriation of 100,000 crowns, for the support of those cattle owners who adopted measures for the eradication of tuberculosis from their herd, as recommended by Prof. Bang. The importation of living animals from foreign countries is only permitted through certain places, designated by the Secretary of Agriculture. The cattle originating from foreign countries are to be placed immediately after their arrival in a quarantine station, and the tuberculin test applied. Those not reacting are remitted to the owners, while all reacting animals must either be deported or immediately slaughtered in a public abattoir under veterinary police supervision. Animals which are imported for slaughtering will not be quarantined, as well as the tuberculin test omitted, but are, after official marking, to be taken to an official abattoir and slaughtered inside of ten days. All cows affected with tuberculosis of the udder must be slaughtered under official supervision per order of the veterinary police. After the slaughter of these animals the owners receive compensation from the government. The dairies are prohibited from feeding or distributing milk or buttermilk for the feeding of animals which is not heated to at least 80°C. To the same heat must also the cream be subjected, from which the export butter is to be produced.—(*Maanedsskrift f. Dyrlaczer.*)

"FOOT-ROT IN SHEEP: Its Nature, Cause and Treatment," is the title of Bulletin No. 63, U. S. Department of Agriculture, by John R. Mohler, V. M. D., and Henry J. Washburn, D. V. S., Chief and Assistant Chief of the Bureau of Animal Industry. It is a thorough exposition of the subject, well illustrated with cuts of the lesions produced, and colored plates of microscopical fields of the *Bacillus necrophorus*, as well as test-tubes showing the development of colonies of the bacilli.

ARMY VETERINARY DEPARTMENT.**THE RINDERPEST AND THE EFFECT OF KOCH'S
BILE INOCULATION.***(Continued from page 1076.)*

The bile for inoculation is taken direct from the gall-bladder of an animal just dead. It is best secured by standing over the opened cadaver with the back turned towards its head, then firmly grasping with both hands the base of the gall-bladder and pushing the contents slowly towards the fundus so that the bladder becomes tightly filled. An assistant then opens the bladder with an aseptic knife at a place that has not been touched by the hands, and the stream of the bile is caught in a sterilized glass jar. The bile should be used for inoculation as speedily as possible, because it can only be preserved a short time and this only in a cool place protected from sunlight. It is also best to make the inoculation in the shade of a stable, tree, etc.

As pointed out by Koch, not every kind of bile is fit for the protective inoculation, but only such as presents a dark green color, a fluid consistence, which has the normal, characteristic smell, and which, when shaken, produces a white and lightly greenish foam. Such a bile is only found in a small proportion of deceased animals. The bile was often enough of the proper color, but either too thick or mixed with concrements, or it had a light-green to gold-yellow color as a result of progressive decomposition. The greatest trouble, however, was that even if the bile was of the desired quality it was seldom of sufficient quantity for a prompt inoculation of all animals, which consequently had to be divided into smaller bunches for this operation, and delay occasioned.

The inoculation is performed by hypodermic injection of 10 c.c. of bile into the soft skin of the lower neck and chest near its median line, after this part has been previously disinfected. As a rule the animals give little resistance to the operation, and it was generally sufficient to have one or two men hold the animals by the horns. Within a few days a swelling forms at the point of inoculation (inoculation-tumor), which is not painful to the touch, and which gradually disappears, only in a few instances leaving a hard nodule in the skin. Septic infection has not been noticed by this proceeding.

After the inoculation of the herds B and C there appeared

still 14 acute cases with 4 deaths (28 per cent.), but as the mortality had been before threefold the favorable result of the protective inoculation was doubtless. On the other hand it was proven that the immunization with bile does not absolutely prevent death after the acute process of the disease has taken its course. Thus the question offered itself whether something more definite could be ascertained in regard to the nature of the effect of the inoculated bile, and whether it was possible to evolve a more accurate method in its application by which the mortality could be reduced to a minimum.

Some hints in this direction were given us by the results of a control-experiment which was undertaken with another object in view. One ox which had 24 days previously been injected with bile, and a second ox which in all probability had not yet been infected with rinderpest, were each given two c.c. of virulent pest-blood. While the first ox showed no other signs of reaction but a rise of temperature of one degree Celsius (from 38° to 39° C.). On the morning of the second day the second and unimmunized ox soon evinced signs of an acute illness. On the morning of the fifth day his temperature, which had previously been vacillating between 38.9 and 39.2° C., was now 39.4° C., running up to 40.7° C. on the seventh day, then falling in irregular remissions to below normal on the 17th day. Soon after fever had set in he showed loss of appetite, which occasionally changed into a ravenous appetite; diarrhoea was present from the 8th day with bloody emissions on the 16th day. He died on the 17th day.

The post-mortem examination showed in the fourth stomach and in the duodenum numerous ulcers which had mostly cleaned themselves and were already covered with scales indicating a process of healing. A few other ulcers, however, were still covered with a dirty, slimy material. There were hæmorrhagic infarcts in the inflamed mucous membrane of the colon, and swollen and partially hæmorrhagic Peyer's plaques. The examination of the mucous membranes of the eye and mouth showed them to be normal.

From this post-mortem result and the long-drawn course of the disease it was evident that this was a mild case with a tendency for recovery. Yet, in spite of this fact, this animal showed all the clinical symptoms which were ordinarily observed in all other infected animals with the exception of a discharge from the eyes and nostrils.

(To be concluded.)

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THE STATUS OF THE ARMY VETERINARY BILL.

While definite information regarding further progress of the Army Veterinary Bill has not been obtainable up to this date (February 15), it is at least known that it has not made an unfavorable impression at the offices through which it has been passing so far. It is further known that some officers who may be called upon later on to decide the fate of the Bill, have given it as their private opinion that the Bill should meet little if any opposition. That it has not as yet been under consideration by the General Staff is explained by the fact that several urgent measures which needed immediate action had taken up all the time of this military tribunal, but that it will be officially considered as soon as its docket is reached.

While thus happily no bad news need be recorded, it is nevertheless evident that the Bill cannot possibly reach Congress during the present session. It will thus be our duty to continue our efforts in a steadfast but conservative manner, and to have our Bill carried through the necessary preliminary steps early next fall so that it may not again be held back by other more urgent measures. (O. S.)

THE State Associations of Missouri, Kansas, and Nebraska are each making an effort to secure veterinary legislation in their respective States.

BULLDOG SAVES CHILD.—The entire family of Morris Kunnel narrowly escaped suffocation last night in a fire in their home in the five-story tenement house, No. 183 Harrison Street, Brooklyn. They live in the basement. Mrs. Kunnel had fallen to sleep in the kitchen early in the evening. She was awakened by dense smoke. Half suffocated, she threw her five-year-old son Isaac through the back door and then started to the front of the house for her other two children—Rafael, six years old, and Robert, seven months. Robert had been asleep in his crib most of the evening. When Mrs. Kunnel got to the crib she found it empty. The child was not in the room. She aroused Rafael and both began to search for the baby. The mother had to stagger to the hall to get some fresh air. Just outside the door she fell over the baby, which was being dragged through the hall by the family bulldog, Pete. Pete had gone to the crib when the fire first broke out, and overturned it. He had then seized the baby's clothes in his teeth and dragged him to safety—(*New York Tribune, Feb. 12.*)

CORRESPONDENCE.

DR. LEONARD PEARSON ISSUES A CIRCULAR LETTER OF WARNING ANENT A PREMATURE ATTEMPT TO IMMUNIZE CATTLE AGAINST TUBERCULOSIS.

PHILADELPHIA, January 31, 1905.

The following letter is being sent out to owners of cattle by a large firm of druggists in New York City:

"We would like to call your attention to some facts in reference to combating tuberculosis in cattle, feeling sure that they will interest you. Tuberculosis in cattle has proved to be more destructive to these animals than all diseases put together. Aside from this, tuberculosis in cattle is more or less dangerous to human beings, especially to children, due to the consumption of milk. All measures taken so far to suppress tuberculosis in cattle have proved to be of no success; the strictest veterinary police and the most thorough sanitary institutions, supported by the use of tuberculin, have failed to check tuberculosis.

"The latest method of Professor v. Behring, whose name is world renowned, seems to have solved the problem as to the suppression of tuberculosis in cattle. Professor v. Behring has been working on this subject practically for quite a number of years, and his wonderful results base upon thorough experimental work. We therefore have to deal with facts and not with theories.

"The method itself is comparatively plain and consists of two inoculations, the second one following the first twelve weeks later. The inoculation is especially opportune in calves and young heifers not exceeding the age of six months. The two inoculations will immunize them against tuberculosis for their lives. In order to render older cattle immune, a thorough examination, followed by a tuberculin test, has to be made before inoculating.

"We furnish the vaccine and have it also injected by our veterinarian, in order to be sure that it will be done properly."

The above letter states, in effect, that cattle may be protected against tuberculosis for their lives by vaccination according to the method of von Behring. The project is to introduce into this country the method of immunization that has been practiced and written upon by von Behring and others of his school.

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It is not claimed that this drug firm has any information upon the subject beyond that resulting from the experiments of von Behring and others of his school.

The plan recommended in the above letter is good and the claims made by it are reliable and sound if the plan of immunization recommended by von Behring is good, and if his results substantiate the claims set forth.

The work of von Behring is on record. Vaccinations made according to his plan have been carried out by others and have become matters of record. Therefore, it is not necessary for us to rely for our information upon the unsubstantiated claims of a business firm endeavoring to make money by the sale of vaccine against tuberculosis.

Briefly, I may say, that the claims in relation to the work of von Behring are exaggerated and in part they are without foundation. Professor von Behring has but recently adopted the method of vaccination that is advised in the above letter. There is absolutely not the slightest evidence to show that by means of it cattle may be immunized "for their lives" or, indeed, that they may be immunized against tuberculosis from natural sources for a length of time sufficient to make the vaccinations at all valuable.

What has been proven is, that by means of certain methods of vaccination, much more prolonged and laborious than the two-inoculation-method referred to in the above letter, cattle may be immunized to a certain, and also to a great extent against artificial infection by direct inoculation. So much is definitely established; but how long immunity will last, and whether a practicable degree of immunity can be conferred at all by such a short method as von Behring now recommends remains to be proven.

Experiments with the view of settling these points are now in progress in this country under the direction of the State Live Stock Sanitary Board of Pennsylvania. Similar experiments are in progress in Germany, Austria and Hungary under the direction of Professor von Behring and others. It should be stated that the last reports upon von Behring's method, published in his own journal, by Hutyra, fail to show that the method of vaccination now recommended by von Behring is sufficient for practical purposes. The report referred to shows that the animals vaccinated according to von Behring's method whose immunity was afterwards tested by inoculation with bovine cultures, became infected with tuberculosis and some in an exces-

sively severe form. Not the slightest immunity followed vaccination in some cases.

It should be made clear that von Behring's vaccine is nothing more or less than dried, living tubercle bacilli of precisely the sort that are most frequently found in human tuberculosis. These organisms are injected into the blood. They are, of course, carried to all parts of the body and it is possible that they may be excreted through the udder. Some recent experiments on goats by Karlinski have shown that tubercle bacilli injected into the circulation may be excreted in the milk a long time afterward, in a large percentage of cases, and may infect animals fed on this milk, even though the udder of the animal that received the injection is wholly free from evidence of tuberculosis. It will, therefore, be seen that precautions should be observed in regard to the vaccination of older cattle beside those referred to in the druggists' letter. This is a phase of the subject that must be carefully studied before vaccination is applied to milch cows.

Personally, I am strongly of the belief, as a result of numerous experiments made by Dr. S. H. Gilliland and myself, that a practicable and safe plan for immunizing cattle against tuberculosis will soon be available. It should, however, be made clear that the plan of von Behring, that is recommended so unqualifiedly by the druggists, is not proven and is insufficient so far as it has been tested by direct inoculation.

Any one who is disposed to try this system of vaccination should feel that he is making a scientific experiment for the purpose of gaining information. With our present knowledge, vaccination should not be practiced on cows in milk, or on heifers or cows carrying calves, excepting for purposes of research.

It should also be understood, and this is a highly important point, that an animal that has been vaccinated after von Behring's method may subsequently respond to the tuberculin test as a result of the vaccination; consequently such animals cannot be sold subject to the tuberculin test.

Altogether, the tone of the letter and its unsubstantiated claims are of the patent medicine variety and furnish support to the arguments of those who believe that the production and sale of vaccines, anti-toxines, etc., for animals as well as for man, should be under more stringent State control.

LEONARD PEARSON,

Pennsylvania Live Stock Sanitary Board.

LOCAL ANÆSTHESIA FOR ARYTENECTOMY.

LEWISTON, IDAHO, Feb. 14, 1905.

Editors American Veterinary Review:

DEAR SIRs:—Would it be possible to operate for roaring by exposing the pneumogastric and recurrent nerves, and using cocaine or stovaine as per operation on the eye, instead of using chloroform, as used by Dr. Tegg, M. R. C. V. S., and reported in the REVIEW for November, 1904?

Yours respectfully, E. S. ROBERTS, D. V. S.

ARMY HOSPITALS.—We are informed that field hospitals for sick and disabled horses will be part of the future war equipment of the British army. According to the *Medical Record*, two such hospitals have been formed in England, and the system is proving most satisfactory in India. In Manchuria the Japanese have put to practical use the field-hospital service for animals, with the result that the loss of horses is only six per cent.—(*Our Animal Friends.*)

A GOOD EXAMPLE.—Dr. William Herbert Lowe has been invited by the Passaic County Medical Society to read a paper before that body, Tuesday evening, March 14, on "Conditions and Diseases of the Cow Rendering her Milk Unfit for Human Consumption." Several prominent human practitioners will speak on the milk question from other standpoints. We make note of the fact that Dr. Lowe is going to speak because it has been, and still is, rather the exception than the rule for medical societies to invite a veterinarian to address them even on animal food products or on diseases having their origin in the lower animals.

A LESSON IN ADDITION.—Speaking of milkmen, this story comes from one of the primary schools in Auburn. It was the lesson hour in combination of objects. "Now," said the teacher, by way of explanation, "you can't add apples and pears together and just get apples or pears and you can't add marbles and nuts and get just marbles." At this moment a long, lean arm shot up from one of the back seats. The arm belonged to —, who was the son of a milkman. "Well?" asked the teacher. The little fellow stood up by his desk and composed his countenance as best he could. "I know of two things that you can add together and git jes' the same figgers," said he, stoutly. "Yer can add water ter milk an' git jes' milk!"—(*Lewiston (Me.) Journal.*)

SOCIETY MEETINGS.

IOWA STATE VETERINARY MEDICAL ASSOCIATION.

The seventeenth annual meeting was called to order by President J. Miller, at 2 P. M. in the club-room of the Savery Hotel. Owing to the extreme cold weather, we had no morning session, the thermometer registering 20 degrees below zero. A number of trains were cancelled and nearly all were late, there being only about ten members in attendance before noon.

President Miller presented his annual address as follows:

PRESIDENT'S ADDRESS.

"Fellow-Members of the Iowa Veterinary Medical Association:

"As I stand before you I feel the inspiration and vigorous enthusiasm kindled by this excellent organization of practitioners which stimulates its Presidents, augments the mutual spirit of fellowship between us and promotes in those in this assembly a greater pride in their State, their profession and their co-workers.

"We may well be proud of the Hawkeye State, her fame has spread far and wide as a producer of horses, cattle, sheep and swine which mature so quickly and completely on its luxuriant pastures and abundant supply of golden grain from her rich and rolling prairies. With such an environment as ours we cannot reasonably expect anything but glorious success.

"None of the unpleasant experiences of nursing a feeble, emaciated institution back to vigor has come to me, but rather the exhilarating effect of coaching a vigorous body towards the goal. An increasing membership, a constant gain in the efficiency of its members, a gradual but very perceptible widening of its influence all mark the fact that this organization has awakened in part, at least, to its individual responsibility and that it has a commendable position among institutions of this order. The chief purpose of these annual meetings is to promote interest in veterinary science, to exchange valuable accounts and to foster animal husbandry.

"The narration of different cases we have found to be beneficial, instructive and interesting, and nothing but the highest commendation can be offered to practitioners who have given us such valuable accounts of their experiences which have proven so helpful in similar cases we have met.

"It is within the power of this enterprising body of ever-

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increasing members to in the future prepare articles of even greater interest and helpfulness, for we have more men to report, therefore, ever-widening field and experiences. In one or more sections of the State certain diseases are frequently found, while in other portions they rarely occur, and thus the mature judgment born of the large experience of one practitioner may supplement the limited experience of another.

"New remedies are coming on the market and are being largely advertised among the profession and stockmen throughout the country. Some of these remedies have considerable merit while others are worthless and should be tabooed by this organization. Serum therapy is attracting more attention than ever before, and according to recent developments wonderful things seem to be in store for us along this line, and it is a matter of unusual interest that we are to have a report at this meeting bearing upon the use of anti-streptococcic serum. It is hoped that Ligniere's polyvalent serum will fill the place intended by its discoverer.

"The vigorous campaign being waged by Dr. D. E. Salmon and his corps of inspectors against scabies is of very great importance to the stockmen of this State, whose cattle and sheep interests were threatened by the appalling spread of this disease from contiguous territory.

During the year *maladie du coit*, another contagious disease, has made its appearance in this State for the first time. It is only within the past few years this subtle venereal malady has been known to exist in this country. At first only a limited area was infected and the strict measures followed would seem to insure its extermination, but it continues to make its appearance in new places, causing a great disturbance and intercepting the horse business in the locality for months. Because of the great interest at stake and the serious business disturbances and financial loss that may be sustained by this and other contagious diseases, it is imperative that veterinarians who are guardians of these interests should be quick to recognize and prompt to report all outbreaks to the proper authorities.

"Any carelessness or indifference on the part of any member of the profession in this regard is not in accord with the best interests of the public, from whom he may expect the severest censure.

"A few years ago hog cholera severely crippled the swine industry of this commonwealth, but since the dry season of 1902 very few localities have suffered to any great extent from

this disease. To be comparatively free from such scourges is a reason for great rejoicing, especially among the agricultural class. But it is found that this species harbors another disease which is on the increase, and already is found in a sufficient number of carcasses at almost every official abattoir in this country to cause business anxiety and worry, if not alarm. I refer to tuberculosis, which is found more frequently in swine than any other class of the food-producing animals. The tubercular bacillus has no conscience, it knows no bounds and refuses to confine itself to any species. It is not satisfied with the ravages upon the human family and the domestic animals, but it has invaded the birds of the air, and the fish of the sea are not altogether immune from its attack, as it can accommodate itself alike to warm and cold-blooded animals.

"In looking over a thousand hogs it would be hard to convince a farmer or any observer that several had consumption, because they all appear in good health, there being no appreciable signs of disease, the animals' constitution being strong enough to conceal all evidence of the disease until the latter stage has been reached.

"Owing to this concealment the packers have been obliged to bear the brunt of the loss, but the time is coming, there being considerable talk already at some markets of discrimination against hogs from certain localities in this State. In view of these facts and the knowledge of the brief exposure necessary to transmit this disease from one animal to another, as indicated by recent experiments in the Bureau of Animal Industry, would indicate that present measures in vogue in this State are altogether inadequate to cope with this plague.

"The frequency of tuberculosis among food-producing animals and especially among cattle and swine is a problem for solution vastly more difficult than cholera or contagious foot-and-mouth disease, or any other contagious disease known. So firmly has it become entrenched in the human family and such devastation has it wrought that for the past few years the skill and genius of the physicians and sanitarians throughout the civilized world have been battling against it with the result of having only slightly reduced the mortality.

"With similiar tenaciousness tuberculosis has fastened itself upon the chief food-producing animals, and unless better measures are inaugurated for its control and eradication and a more thorough organized warfare waged against this infection the cattle and swine industry will be severely damaged.

"Since such meager results have been obtained in the field of regular medicine, the question might be asked, could we hope to achieve any more in the domain of veterinary medicine? While it is admitted that we could not expect to receive any more coöperation from the general public in the latter than in the former sphere, as the preservation of the human family is of paramount importance, it should be remembered that one of the most efficient ways of stamping out contagious and infectious diseases in the veterinarian's domain is entirely inadmissible in our sister profession; therefore, it is reasonable to assert that more speedy and lasting results might be attained. It should not be omitted, however, in dealing with a contagious disease acknowledged to be transmissible from man to the lower orders of animals and vice versa, and one that has already encompassed the various species, that the best results can only be secured by a general attack against the common foe. If we would accomplish the greatest good in a work of this character we must relegate our professional interests to the background and strive to advance the public welfare by identifying ourselves with dairy organizations, farmers' institutions and breeders' associations where we may become familiar and help solve some of the problems which annoy more or less of their members.

"We all love magnanimous people, and some good professional advice voluntarily, but yet judicially bestowed will be appreciated and at the same time win for us a host of friends. Without this friendship we shall appear as antagonists and cannot hope for coöperation in bringing about legislation which shall result in mutual blessing. In addition to the inspection of dairy cows already recommended by this Association, it is hoped the present sanitary committees will bring in some suggestions relative to the sterilization of the by-product of dairies, cheese factories and skim stations.

"Your officers, especially the Secretary, have endeavored to secure a good programme for this meeting, and we believe we have succeeded, with the exception of the clinic. We realize the importance of this phase of the work of this organization, and we regret exceedingly that the programme shows nothing definite along this line. There are, however, some members of this Association who frequently do better than they promise or even intimate, and it may be they have a pleasant surprise in store for us this year. The Secretary taking cognizance of this and being a man of faith has announced a clinic.

"Last year the clinic was a failure owing to unfavorable

weather. This year nothing definite is announced because of the small amount usually voted to defray such expenses. These are items for us to consider, for undoubtedly arrangements should be made to meet such contingencies. If I am correctly informed the usual revenue is not obtained from the majority of this class of clients as gratuitous service is a necessary bait and has become more or less customary. It is stated by one of our members that he paid out \$100 in cash in caring for a clinic besides the loss of considerable time and some good customers. Such an experience would dampen the ardor of any enthusiast and it is wrong that any member should be imposed upon to such an extent. It is said of many of our citizens that they always want something for nothing, but I am of the opinion the members of this Association are not of that stripe.

"I am persuaded they want a good medical and surgical clinic established and properly conducted and that they are willing to pay their proportion of the necessary expense.

"Our members want not an exclusive diet of fine spun theories which tend to dyspepsia and professional dessication, but an intermingling of these theories with some practical demonstrations which insure assimilation and the harmonious development of each individual. Under proper management a varied clinic will give force and vital energy to our meeting by stimulating a general interest among its members, by increasing their efficiency and by making more valuable their services.

"During the past year some of our members have rendered considerable service for the benefit of this Association, and I wish to thank you, especially our Secretary and the members of the committees on legislation who secured for us a modification of the law regulating the practice of veterinary medicine in the State whereby the means is provided for the efficient working of the Examining Board and the right of members of other Associations to register and practice here.

"And, now, friends of this assembly, having given a brief *résumé* of the situation as found professionally in this State, I now declare the seventeenth annual meeting of the Iowa Veterinary Medical Association formally opened."

The Secretary announced that instead of the roll-call there would be a card system of registration.

The Secretary moved that the minutes as published in the March (1904) number of the AMERICAN VETERINARY REVIEW be adopted as published. Carried. The Secretary read his report as follows :

REPORT OF SECRETARY.

"Mr. President and Members of the Iowa State Veterinary Medical Association :

"It is with pleasure that I greet you to-day. All here look prosperous and have the appearance of having had another splendid year for practice. There has been some criticism because programmes were not sent earlier. This could not be avoided. I have had what seemed to me a great deal of difficulty in getting the members to agree to prepare a paper or a report of a case for this meeting, but from what I can learn I have had no more trouble than is ordinarily met with by different secretaries. This should not be. All should feel free to help one another. It is not the Association that receives the most benefit, but the member who prepares the paper or report. There are so many successful practitioners who can just as well as not report a case or two. It is a wonder to me that so few do. There isn't a man here but who ran on to something unusual during the past year. It is these reports that are of the most practical interest to us as veterinarians, and while I do not want to underrate the value of a paper, yet so often unless they are on some subject that the author has made a special study of for years, they are just extracts from books which we all have, or should have at any rate. I wrote a number of personal letters asking contributions for our programme. A number responded either by a paper or a good excuse, but there is no excuse in my mind for those who did neither.

"Two different circular letters were sent to all non-members. The first had application blanks enclosed. A few responded, asking for a copy of the constitution and by-laws, and some of these filled out application blanks for the Board of Censors to act upon.

"In the second letter they were again invited to attend the meeting and become one of us, and a few more responded favorably. We are making slow but steady growth and are getting to the top of the profession in the State. In my last letter sent out with the programmes I asked each member to ask personally some of his neighboring practitioners to join. If this was done there is no doubt in my mind but that a number would do so. This Association ought to have at least 175 members. This can only be attained by each member trying to get at least one new member for next year.

"Personal letters were sent twice to those in arrears three years, reminding them of their standing and requesting them to

pay up and retain their membership. There are only twelve members subject to suspension for non-payment of dues, and possibly this number will be reduced before the meeting is over. I am in favor of suspension. If the Association isn't worth paying dues to it isn't worth belonging to.

"Letters were also sent to all those who were suspended at past meetings whose addresses were known, asking them to pay up and again become members.

"If we had membership enough that we could reasonably expect one hundred in attendance we could get the benefit of reduced rates each year.

"As per motion at last meeting I had 200 copies of the constitution and by-laws printed. I looked over all records in my possession and tried to get them right, but to my mind they should be revised soon. The blank pages were left so that any changes could be written in, also a list of new members."

The report of the Treasurer was read as follows:

TREASURER'S REPORT.

<i>Receipts.</i>		<i>Disbursements.</i>	
To cash on hand 1-25-04 . . \$	9.35	By cash, C. W. Gay Exp.	
" " for dues 1-24-04 to		Com. D. & T. . . \$	1.75
1-20-05.	109.00	" " H. E. Talbot for	
" " Membership fees		Janitor	2.00
1-27-04 to 1-20-05 . .	22.00	" " Buck Bros. Signs	2.00
" " Reinstatement		" " H. E. Talbot	
Members	14.00	Room rent.	5.00
		" " J. R. Mohler, No-	
		card Fund.	10.00
		" " Hal C. Simpson,	
		Sec'y Fees.	25.00
		" " Hal C. Simpson,	
		Editing Proc.	20.00
		" " H. N. Pester,	
		Stenographer	3.00
		" " U. G. Johnson,	
		Pen	1.15
		" " E. F. Tucker,	
		Printing.	31.90
		" " F. W. Meyers,	
		Stamps	4.00
		" " G. L. Caswell,	
		Printing.	22.00
		" " H. A. Carpenter,	
		Badges	12.85
		Balance in Treasurer's	
		Hands, 1-25	13.70

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\$154.35

Respectfully submitted, HAL C. SIMPSON.

It was moved that a committee of three be appointed to audit the Treasurer's report. Carried. President Miller appointed H. E. Talbot, W. A. Heck and F. H. P. Edwards. The Auditors reported as follows:

"We, the Auditing Committee for the Seventeenth Annual Meeting of the Iowa State Veterinary Medical Association, hereby certify that we have examined the above account of the Treasurer and that we find it correct.

(Signed) H. E. TALBOT.

"W. A. HECK.

"F. H. P. EDWARDS."

By vote the report was accepted and the committee discharged.

The Board of Censors elected two years ago being absent, except the Secretary, who was otherwise engaged, President Miller appointed J. S. Potter, J. W. Haxby and W. H. Austin to constitute such Board.

Dr. L. U. Shipley read his reports of cases: "A Tubercular Case;" "A Case of Tetanus as a Sequel to Parturition;" "A Case of Pelvic Hernia;" "A Radical Operation for Strangulated Scrotal Hernia." All were thoroughly discussed by those present.

Prof. Henry Albert, Bacteriologist to the State Board of Health, was present and gave a very interesting talk on bacteria. Dr. Albert had a great many slides, which were passed around. Rabies was probably more thoroughly discussed than any subject mentioned.

Prof. Albert was elected to honorary membership in the Association.

Dr. D. E. Baughman read his paper on "Prolapsus of Anus and Rectum," illustrating his ideas by several original drawings. Discussed by McNeal, Heck, Stewart, Bauman, Austin and Haxby.

Dr. J. J. Richardson being absent, the Secretary read his two reports of cases: "Foreign Substance in the Bladder of a Mare;" "A Punctured Wound." Discussed quite freely by Bauman, L. U. Shipley, Koto, Potter, Newman, Edwards, Haxby and Simpson.

Dr. L. L. Diller being absent, the Secretary read his report: "An Ante-mortem Blood-Clot." This was shown. It had been nicely mounted by the doctor.

Moved that we adjourn until 7.30 P.M.

EVENING SESSION.

President Miller called the meeting to order at 8.10.

Dr. S. H. Bauman read a report of a case, "A Peculiar Case of Luxation of the Patella."

Dr. J. T. Thompson not being present, the Secretary read his reports: "Potassium Iodide in a Case of Nasal Obstruction;" "My Experience with the Treatment of Chronic Crural Paralysis following Azoturia;" "Prolapsus of Intestines following Castration."

Dr. H. E. Talbot, Secretary of the Iowa State Board of Veterinary Examiners, made a verbal report on the workings of the Board. That in the five years five graduates and about forty-five non-graduates since registering have died. There were 240 graduates and 546 non-graduates registered. That 620 of these had renewed certificates for this year.

Dr. A. Adamson made a verbal report of four cases of tetanus treated with dilute hydrocyanic acid U. S. P. No. 1, mule, cause, rusty nail scratch on breast, mxxv , in water zi , intratracheally; No. 2, mule was lame two weeks before, mxx , in water zi ; No. 3 and 4, cause unknown, both had mxx , in water zi every eight hours, and all made good recoveries.

J. H. McNeal reported that F. R. Ahlers had splendid results from the injection into neck every two hours of carbolic acid, mgo , glycerine mgo . Produces swellings, pain ensues. The immediate neighborhood sloughs out, but the resulting wounds heal very rapidly. In plain cases 90 per cent. recover.

W. C. Scholty reports good results from mercury bichloride, $1\frac{1}{4}$ gr. in 20 c. c. water every four hours.

W. H. Austin, 80 per cent. recoveries with carbolic acid. He gives mxxv in water zi . Is strong in his belief that surroundings have a great deal to do with results obtained. If needed he gives chloral hydrate or cannabis indica, or sodium hyposulphite per rectum.

C. J. Heckard reports 75 per cent. recoveries with carbolic acid zij , water zij , every four hours for 24 hours, then waits 12 hours before beginning to repeat.

F. H. P. Edwards and L. U. Shipley reported that in bog spavin and thoroughpin so far they had good results from laying open freely of tendon sheaths under proper precautions and injecting collargol, 1 per cent. W. C. Scholty aspirated three times. Injected alcoholic solution of iodine 5 per cent., zij each time; repeated in two weeks, and then in four more weeks afterwards; bandaged, and in a couple of days blistered. This mare raced afterwards. W. H. Austin and P. O. Koto report bad results from this treatment. Probably used too strong a

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solution. C. J. Heckard after aspirating puts chloropercha, cotton next, and then a bandage. Repeats chloropercha in twelve hours and leaves chloropercha on until it wears off.

J. H. McNeal aspirated two cases of gonitis and injected 33 per cent. carbolic acid, and in one case 50 per cent. carbolic acid. Manipulate, then let all run out that will. Also obtained good results from same treatment of extensor tendon sheaths. J. W. Haxby reported having opened two extensor tendon sheaths under proper precautions and obtaining good results. One high actor he aspirated and injected four times, finally obtaining good results.

Moved by W. A. Heck that we adjourn until 9 o'clock tomorrow morning.

SECOND DAY—JAN. 26TH.

Meeting called to order at 9.30. Secretary read a communication from Dr. Repp. Moved that the Secretary cast the unanimous vote of the Association for Dr. Repp for honorary membership.

The names of several members who are now non-residents was next read, and their dues being paid in full they asked to be placed on the list of honorary members. Motion made to have these applications laid over until next meeting.

Motion that a committee of three be appointed to revise Constitution and By-laws, to codify and bring them up to date. Amended to read five instead of three. Carried. President Miller appointed T. A. Shipley, W. A. Heck, G. L. Buffington, S. H. Bauman and Hal C. Simpson.

Dr. W. A. Heck read his paper, "Some Minor Operations." It was thoroughly discussed by L. U. Shipley, T. A. Shipley, G. L. Buffington, H. L. Stewart and W. H. Austin.

Dr. S. H. Bauman read his paper, "Foot Rot in Sheep." It was thoroughly discussed by W. A. Stuhr and J. H. McNeal.

Dr. P. O. Koto made a verbal report on *maladie du coit*. Dr. S. H. Bauman read notes of a post-mortem of a mare that had died of *maladie du coit*. A great many questions were asked regarding this outbreak. It certainly speaks well of Dr. Koto, the State Veterinarian, and of Drs. Davidson and Day, of the B. A. I., that this outbreak has been handled so successfully.

Meeting adjourned until 1.30.

Meeting convened at 1.30, Vice-President Hazlet in the chair. Secretary read letter from Dr. J. E. Brown relating to serum-therapy. He afterwards read Dr. J. E. Parslow's paper on "My Experience with Antistreptococcic Serum." Both were

thoroughly discussed. Dr. C. E. Stewart spoke very favorably of results obtained from anti-pneumonic serum, and also from the immunizing serum for distemper and influenza.

Dr. H. L. Stewart read his paper on "Amputation of the Penis."

Dr. R. R. Hammond not being present, Dr. W. H. Austin was appointed in his place on the Committee on Resolutions.

Dr. G. L. Buffington read his reports of cases. They were freely discussed, particularly the one relating to acute indigestion.

Induration of os uteri was discussed quite freely by W. H. Austin, T. A. Shipley, W. A. Heck, L. U. Shipley, S. H. Bauman and Hal C. Simpson.

Periodic ophthalmia was freely discussed. Dr. J. W. Haxby makes a hood, puts large pledgets of cotton over eyes and has a slit in hood and keeps the cotton saturated with 1 to 1,000 of bichloride solution. Drs. L. U. Shipley, W. H. Austin, G. L. Blanche report that 80 per cent of the cases of periodic ophthalmia come from the bottom farms. Drs. A. A. Adamson, S. K. Hazlet, S. H. Bauman, D. H. Miller and F. J. Neiman believe it to be hereditary. If hereditary, why do Western horses who never have it out West become affected after coming into the more thickly settled States?

The Secretary reported that last year when trying to get suspended members to apply for reinstatement a mistake had been made and a number had asked to be reinstated at the reduced rates. It was shown how this was due to an error of the printers and was not found out until after the meeting. Moved that reinstatements stand. Carried.

Report of the Committee on Sanitation called for. The Chairman, Dr. Niles, not being present, Dr. Koto said he had forwarded to Dr. Niles his report. Dr. Koto made a short verbal report.

Dr. F. F. Parker, Chairman of the Committee on Disease and Treatment, could not be present on account of sickness. Dr. W. A. Heck made a verbal report on open joint. His suggestions were cleanliness, have drains flushed clean with bichloride solution. Dr. P. Malcolm reported on azoturia.

Committee on Resolutions presented their report as follows:

"We take this means of extending our sincerest regrets and most heartfelt sympathy to Mrs. Sarah E. Harrison, wife of the deceased Dr. E. I. Harrison, in this the hour of her sad bereavement. Dr. Harrison has been a long and faithful member

among us, has been ever willing to contribute the best of his efforts toward making the Association meetings most profitable. Having experienced the pleasure of his association, we shall feel the loss of his helpful influence in the future. Therefore, we, the chosen representatives of the I. S. V. M. A., ask that a copy of the above be spread upon the minutes of the Association and also that a copy of the same be enclosed to Mrs. Sarah E. Harrison, wife of the deceased brother.

"Respectfully submitted,

T. A. SHIPLEY.

"W. A. STUHR.

"W. H. AUSTIN."

President Miller read "A Comedy." *

Board of Censors reported favorably the names of R. M. Edwards, M. D. C.; W. C. Scholty, D. V. M.; F. L. Skrabble, M. D. C.; B. F. Barker, M. D. C.; W. W. Talbot, M. D. C. Moved that the Secretary cast the ballot of the Association for the above-named veterinarians for membership in this Association. Carried.

Moved that the application of Dr. P. A. Aegeson be laid over, there being no vouchers. Carried.

It was moved that by reason of his allowance from medical schooling that the By-laws be suspended and that Dr. James Dixon be accepted for membership. Carried.

Dr. J. H. McNeal invited the Association to come to Ames for the next annual meeting.

Moved by Dr. C. E. Stewart that when we adjourn we do so to meet at Ames at call from the President. Carried.

Election of officers resulted as follows :

President—S. H. Bauman, Birmingham.

First Vice-President—P. Malcolm, New Hampton.

Second Vice-President—W. H. Austin, Newton.

Secretary-Treasurer—Hal C. Simpson, Denison.

Board of Censors—D. H. Miller, Harlan; C. E. Stewart, Chariton; G. L. Buffington, Brooklyn.

Moved by Dr. Koto that the Association extend a vote of thanks to the management of the Savery Hotel for the courtesies extended the members of the Association. Carried.

Moved by Dr. J. Miller that the Secretary be allowed the usual fees for his services, and for editing the proceedings. Carried.

The following were in attendance: T. A. Shipley, Cedar

* See April REVIEW.

Rapids; J. H. McNeal, Ames; S. K. Hazlet, Oelwein; F. J. Neiman, Marshalltown; W. W. Talbot, Oskaloosa; J. Miller, Ottumwa; W. A. Stuhr, Ames; G. W. Blanche, Belle Plaine; D. E. Baughman, Fort Dodge; J. W. Bunker, Winterset; W. A. Heck, West Liberty; W. H. Austin, Newton; E. G. Martin, Schaller; B. F. Barber, Fonda; J. S. Polter, Iowa City; L. U. Shipley, Sheldon; F. H. P. Edwards, Iowa City; P. O. Koto, Forest City; C. J. Heckard, Wheatland; S. H. Bauman, Birmingham; James Dixon, Tipton; C. E. Stewart, Chariton; J. W. Haxby, Villisca; H. E. Talbot, Des Moines; W. C. Scholty, Osage; D. H. Miller, Harlan; A. Kaderahek, Fort Dodge; Hal C. Simpson, Denison; P. Malcolm, New Hampton; H. L. Stewart, Lacona; Prof. Henry Albert, Iowa City.

HAL C. SIMPSON, *Secretary*.

MISSOURI VALLEY VETERINARY ASSOCIATION.

The semi-annual meeting of this Association was held in the class rooms of the Kansas City Veterinary College, corner of 15th and Lydia Avenue, Kansas City, Mo., January 11th and 12th, 1905. The morning session was called to order at 10 A. M. by the First Vice-President, Dr. V. Schaefer, of Tekamah, Nebraska. A letter of regret at inability to attend was read from the President, Dr. J. H. McNeal, of Ames, Iowa.

The following members and visiting veterinarians were present: Drs. A. Byrd, G. R. Conrad, F. F. Brown, J. J. Drasky, F. H. Davis, F. N. Elwell, W. J. Guilfoil, J. H. Gould, S. E. Hershey, T. W. Hadley, D. Knisley, A. T. Kinsley, W. T. King, B. F. Kaupp, W. C. McPherson, B. W. Murphey, C. M. Morgan, S. T. Miller, G. W. Merker, R. C. Moore, W. E. Martin, T. C. McCahey, C. B. McClelland, O. M. Norton, G. B. Nicholas, F. W. O'Brien, F. A. Pouppert, A. T. Peters, O. J. Phillips, H. L. Ramacciotti, H. V. Goode, C. E. Steele, Chas. Saunders, X. I. Richmond, L. I. Palmer, H. M. Schmeltz, F. H. Tucker, W. H. Gatchell, V. Schaefer, S. Stewart, H. J. Sebaugh, S. E. Watkins, W. Warren, F. M. Starr, L. H. Thurston, and 250 students.

The minutes of the previous meeting, which was held in Omaha in June, 1904, were read and approved.

The President appointed Drs. A. T. Peters and S. Stewart to serve on the Board of Censors in the place of absentees.

The following applicants for membership, duly vouched for and favorably passed upon by the Board of Censors, were presented: Missouri:—Drs. S. A. Peck, Oak Grove; Stanley Smith, Co-

lumbia ; M. A. Peck, Independence ; W. E. Martin, Perry ; A. J. Munn, Fayette ; Hugh McConnell, Marshall ; J. B. Tiffany, Columbia ; J. H. Slater, Richmond ; W. Warren, Windsor ; H. J. Sebaugh, Farmington ; H. Bradley, Windsor. Kansas :—Drs. Robt. Dill, Kansas City ; F. A. Pouppert, Leavenworth ; L. H. Thurston, Girard ; J. H. Gould, Ft. Riley ; S. E. Watkins, Wisley ; C. L. Barnes, Manhattan ; G. M. Fox, Minneapolis. Iowa :—Dr. S. H. Bauman, Birmingham. Nebraska :—Dr. J. J. Drasky, Crete. Indian Territory :—Dr. C. D. Meredith, Vinita. Moved by Dr. Stewart, seconded by Dr. Goode, that the Secretary be instructed to cast the vote of the Association for the names read to become members of the Association. Carried. The Secretary then cast the vote of the Association, and the President declared them elected.

The following resignations were presented and accepted : Dr. M. Jacobs, Knoxville, Tenn., and Dr. O. Verschelden, St. Mary's, Kansas.

A paper by Dr. O. O. Wolf, of Eureka, Kansas, on the subject of "Abortion" was then presented. The paper brought forth a lengthy discussion, which was participated in by Drs. Peters, Martin, Moore, Schaefer, Stewart and others. This paper will appear in the REVIEW very soon.

At 12 o'clock the Association adjourned to luncheon, which was served in the rooms of the College Building.

At 1 P. M. a clinic was held in the amphitheater of the K. C. V. C., which was witnessed by 300 veterinarians and students.

Case No. 1.—Sorrel mare, weight 1,000 lbs., aged 9 years, was presented for diagnosis. Lameness in the left hind leg. Dr. V. Schaefer was called upon to diagnose the disease. Diagnosis : bone spavin, advanced stages. Prognosis unfavorable.

Case No. 2.—Brown mule, weight 1,200 lbs., aged 10 years, presented for diagnosis. Lameness in left hind leg, could not bear weight upon leg. Dr. W. E. Martin was called upon to diagnose case. Diagnosis : destruction of articular cartilage of the femoro-tibial articulation. Prognosis unfavorable.

Case No. 3.—Grey gelding, aged. Lameness in left fore leg, "cocked ankle," presented for diagnosis. Drs. Phillips, Goode and Warren were called upon to examine and make diagnosis. Diagnosis : contraction of perforans tendon. Tenotomy recommended. The horse was confined on the operating table, an anæsthetic administered (chloroform), and the operation performed by Dr. V. Schaefer, of Nebraska.

Case No. 4.—Dr. W. E. Martin demonstrated passing the stomach tube, using the Phillips' tube.

Case No. 5.—Dr. Moore gave a short and instructive talk upon the structure of the larynx, followed by an operation for roaring (the removal of the vocal cords).

Case No. 6.—Next case, exhibition of a grey gelding which had been previously treated for thoroughpin of the right hock. The thoroughpin was a large one, on which blisters had been tried with no favorable results. The synovia was aspirated and the sheath injected with a mixture of iodine $1\frac{1}{2}$ ounces and carbolic acid $1\frac{1}{2}$ drachms, which was permitted to remain 15 minutes and was then withdrawn. No satisfactory results. Next procedure was puncturing into the sheath with a firing iron and immediately injecting above mixture which was allowed to remain. Severe lameness and swelling followed; the horse was kept in the hospital 30 days, then in stable at home two weeks, then turned on pasture three months, returning cured. Later a small bursal enlargement appeared on the other hind leg which yielded to severe blister.

Case No. 7.—Two heifers were presented for spaying. Dr. S. T. Miller, of Shelby, Iowa, performed the operation through the flank, the patient standing. The doctor performed the operation on the left side and used a spaying ecraseur. Asked about the larva of flies invading wound the doctor said he used pine tar as a preventive, covering the sutured incision and adjacent parts with a coating of tar.

Case No. 8.—A black gelding, 6 years old, weighing 1,400 pounds, was presented. No history could be obtained. An abscess had formed in the region of the jugular furrow, about 12 inches posterior to head. A fistulous tract had formed extending considerable distance down the neck. Other abscess formation was observed in various parts of the body which were sensitive upon palpation. The opinion of Drs. Knisley, Saunders and McClelland, who were called upon to make examination and diagnosis, was that these were secondary abscesses. Dr. Moore reported having seen a case in which acetanilid had been given in paper, the paper lodging in the œsophagus. A hyperdermic needle was inserted and fluid injected into the mass, which was thus softened and passed down. A fistula was the result, finally extending down to the scapulo-humeral articulation. Secondary abscesses in other parts of the body formed.

Case No. 9.—Bay gelding, aged 10 years, presented for diagnosis. History: Had been taken out of stable three weeks previous

to do his regular work, and after going a short distance became exhausted and fell. Was assisted to his feet and led to the barn. Palpitation of the heart was noted, and a venous pulse extending well up the neck. While the animal had somewhat improved under treatment and rest, yet sufficient lesions remained to afford a basis for diagnosis. Drs. Knisley, Hadley and Saunders were called upon to examine and diagnose the case. The opinion was: Insufficiency of the right auriculo-ventricular valve, due to endocarditis. In response to suggestions for treatment they stated that heart stimulants and rest were indicated.

Case No. 10.—A bay mare, 12 years old, presenting an enlargement in the occipito-atloid region. Dr. L. H. Thurston was called upon to diagnose and advise treatment for same. The opinion was: A well-developed case of "poll-evil," and an operation advised. Dr. Thurston performed the operation, advised removing some necrotic bone, making good draining and finally dressing the abscess cavity with solution of eucamphol. Good drainage was afforded and thoroughly irrigated with eucamphol.

Case No. 11.—A Hereford bull, weighing 1,600 pounds, was presented, showing the effects of iodism produced by the previous administration of potassium iodide.

Case No. 12.—Bay gelding, 10 years old, belonging to the city fire department. This horse, while making a run a few weeks previously, had been run into by a street car, injuring the right shoulder, also severely lacerating the biceps rotator tibialis and triceps abductor femoris muscles. The wound involved the anus, but not to a serious extent. The postea-spinatus and teres externus muscles had greatly atrophied. Drs. McCasey, Hayes and Gould were asked to examine the horse, and if possible arrive at an opinion as to the cause of the atrophy. The conclusion was that there had been an injury to the nerve supply of these muscles which interfered with nutrition of the parts.

Case No. 13.—A black male dog, 2 years old, weighing about 30 pounds, with two enlargements in the anterior part of the neck. Drs. Phillips and Warren were called upon to make examination and diagnosis. The opinion was that there was a diseased condition of the thyroid glands. Both lobes were enlarged to about the size of a hen's egg. No treatment was suggested.

Case No. 14.—A cystic calculus was presented for inspection by Dr. McCasey, of Concordia, Kansas. The doctor had removed it from the bladder of a jack. The symptoms described

were: emaciation, fever, difficult urination, and examination per rectum revealed the presence of an immense calculus. The stone was removed through an incision made in the urethra at the ischial arch and the wound left to heal without suturing; no stenosis of urethra following the operation. A member present stated that he had likewise operated upon a similar case, which resulted in stenosis of urethral passage at point of operation.

Adjourned for supper, which was served in the College Building.

EVENING SESSION.

At 7.30 P. M. the meeting was called to order by First Vice-President Dr. V. Schaefer.

The first paper presented was prepared by Dr. J. Harvey Slater, entitled "Strongylus Paradoxus or Lung Worm in Swine."*

Dr. D. F. Luckey presented a paper on "An Epizootic of Quittor Among Horses and Mules," and Dr. W. R. Cooper on "Some Problems Relating to the Value of In-and-out Breeding," both of which will be published in the REVIEW.

Under reports of cases, Dr. G. R. Conrad stated that he had observed several cases of urethral calculi in steers, the calculi lodging or forming at the S-shaped curve of the penis. The steers showed uneasiness, stamping, dribbling of urine, etc. Incision was made through the urethra and calculi removed.

REPORT OF COMMITTEE ON NECROLOGY.

Dr. Robert H. Carswell.

WHEREAS, It has pleased Almighty God to remove from our midst Dr. Robert H. Carswell, of Kansas City, Mo., a valued member of our association, whose death occurred during the past year; be it

Resolved, That this association greatly regrets his loss, and extends to his family its sympathy in their bereavement; and be it further

Resolved, That these resolutions be entered upon the records of this association and a copy be sent to his family.

C. E. STEELE,	} Committee.
S. STEWART,	
A. T. PETERS,	

Dr. John Nott.

WHEREAS, It has pleased Almighty God to remove from our midst during the past year Dr John Nott, of Clay Center, Kansas; be it

Resolved, That this association regrets his loss, and extends to his family its sympathy in their bereavement; and be it further

* Will be published in an early number of the REVIEW.

Resolved, That these resolutions be entered upon the records of this association and a copy be sent to his family.

C. E. STEELE, }
S. STEWART, } *Committee.*
A. T. PETERS, }

The resolutions were adopted.

Moved by Dr. Moore, seconded by Dr. Martin, that next place of meeting be left to the officers of the Association.

Adjourned until 8 A. M., January 12.

At 8 A. M. a demonstration was given by Dr. B. F. Kaupp of the various lice of horses and cattle and of scab parasites of cattle, sheep, chickens and hogs; also some specimens of the head and segments of the various armed and unarmed tape-worms.

The clinic began at 10 A. M.

Case No. 1.—Dog presented with enlargement of scapula. Dr. Conrad diagnosed case as a tumor and advised operation.

Case No. 2.—Oöphorectomy in bitch by Dr. H. V. Goode. It was suggested that $\frac{1}{2}$ grain morphine be given, as it had been reported as being satisfactory in dogs of 30 pounds weight. The operation was proceeded with in 15 minutes after the injection. The dog recovered from the effects of the morphine in a satisfactory manner.

Case No. 3.—Amputation of the uterus, performed by Dr. Conrad, after the injection of morphine as in Case No. 2. The uterus was gravid, containing foetuses about two weeks old. Was removed immediately anterior to the os by means of an emasculator. The bitch recovered satisfactorily from the effects of the morphine.

(It would perhaps be interesting to know that the bitches have both made good recoveries.)

Case No. 4.—Oöphorectomy in mare per vagina, by Dr. V. Schaefer.

Twelve o'clock, adjourned to luncheon, which was served in the class rooms of the Kansas City Veterinary College.

One P. M. Clinic resumed.

Case No. 1.—Plantar neurectomy, by Dr. D. Knisley.

Case No. 2.—Bossi's double tarsal neurectomy, by Dr. R. C. Moore.

Case No. 3.—Peroneal tenotomy, by Dr. Brown.

Case No. 4.—Median neurectomy, by Dr. Moore.

Adjourned.

B. F. KAUPP, *Secretary.*

SOCIETY OF COMPARATIVE MEDICINE NEW YORK
STATE VETERINARY COLLEGE, CORNELL
UNIVERSITY.

The regular meeting of the Society of Comparative Medicine was called to order in the amphitheatre of the Veterinary College by President Dimock at 7.30 P. M. P. V. Weaver, '05, gave an interesting paper on "Glanders," in which he brought out clearly the five reliable means of diagnosis. (1) Clinical symptoms; (2) Mallein test; (3) Orchitis by inoculation of male guinea-pig; (4) Auto-inoculation; (5) Cultural characteristics. The paper was followed by discussion.

The regular order of business was then taken up. Roll-call showed 63 members present. The minutes of the previous meeting were read and approved. F. H. McNair reported for the banquet committee stating that the second annual banquet of the Society would be held at the Ithaca Hotel, Feb. 15th, at 9 P. M.

It being the last meeting of the first term of the college year the election of officers followed:

President—C. E. Smith, '05.

Vice-President—W. J. Taylor, '06.

Secretary—F. H. Wright, '06.

Treasurer—G. R. Chase, '07.

Meeting adjourned at 9.30 P. M.

C. L. ROADHOUSE, *Secretary*.

* * *

THE BANQUET IN HONOR OF DIRECTOR JAMES LAW.

The second annual banquet of the Society of Comparative Medicine in honor of the 10th anniversary of the founding of the New York State Veterinary College at which a special ovation was given Professor James Law, was held in the dining parlors of the New Ithaca Hotel on the evening of February 15th. About 125 students and guests were present.

The tables were prettily decorated with palms and candelabra. All joined in signing "Alma Mater," after which an elaborate banquet was served.

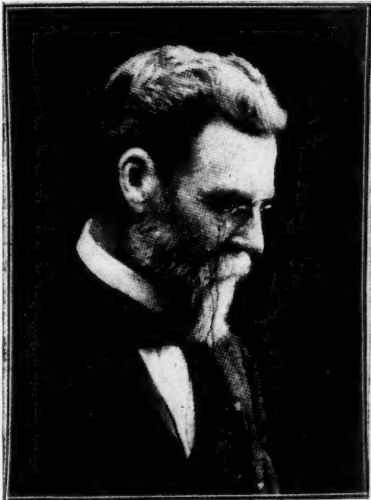
At the conclusion of the feast F. R. Smith, '05, gave a speech of welcome, and said in part: "Gentlemen, we are here this evening for the second annual banquet of this society, at the same time to celebrate the tenth anniversary of the founding of our college, and furthermore to express our love and esteem and to do honor to our 'Grand Old Man,' Dr. Law. To the distin-

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guished friends who are with us to-night and to the alumni of the college who are present on behalf of the Society of Comparative Medicine, I bid you welcome." He then introduced Dr. Fish as master of ceremonies.

Dr. Fish, with a few well-chosen remarks, called on President Schurman to respond to the toast of "The University." President Schurman said that it was not often that he accepted invitations to banquets, refusing more than he accepted, but on this occasion he could not refuse to be present when such a great man as Dr. Law was to be given an ovation.



JAMES LAW.

He spoke at some length on how Andrew D. White discovered that such a man as Dr. Law existed. He said that the students of the veterinary college might well be proud of their director, who was a man who has raised the standard of veterinary science to its present level and who had done more for that science than any other living man. He also spoke of the growth of the college which in the year of its inauguration had 11 students enrolled and to-day had 108, an increase of tenfold in 10 years.

The Hon. Andrew D. White was next called on to respond to "Dr. Law in his Relation to Cornell University, New York State, and the United States." He spoke of his early relations with Dr. Law. He said that no other university professor would ever be able to produce such a man as Dr. Law. He said that he had produced Law and that President Schurman had produced the college.

He told of Dr. Law's duties when he came to this college 40 years ago, and of how hard he worked in the one little room of the only building on the campus at that time, and of what he had done for veterinary science from that time to the present day.

Dr. V. A. Moore responded to the toast of "Dr. Law as a Scientific and Professional Man." He spoke of his early experiences at the college in 1893 when he came here as a freshman,

and of the zeal with which the students used to gather in the old lecture room to listen to lectures given by Dr. Law. He told of how a fellow student told him the story about Ezra Cornell sending A. D. White to England to get a horse doctor. He said at that time Ezra Cornell wanted and Andrew White did.

The next speaker was Dr. David S. White, Dean of the Ohio State Veterinary College, who responded to the toast, "Dean Law Through the Eyes of Dean White." Speaking of Dr. Law he said in part: "His name and fame are known throughout the land and sea. As we gather here to-night to do him honor and witness his students extend to him a token of their love and esteem in the material form of a loving cup, I am tempted to draw from his life a lesson which will ever be to us an inspiration, that it is to be ever noble and to work. And now, Professor Law, I ask you in behalf of the faculty and students of the College of Veterinary Medicine of the Ohio State University to accept our consecrated wish that you will ever be liberally endowed with life's greatest blessing of health and prosperity. For the institution you have founded, may her escutcheon ever be emblazoned with the motto: 'Ever upward, still higher, excelsior.'"

In presenting the loving cup, Dr. D. H. Udall, in behalf of the faculty and students, paid a high tribute to Dr. Law, and said in part: "As pupils we recognize in him those qualities which inspire one with an ambition for scientific proficiency and for the cultivation of those elements which furnish the material for character. We recognize and are impressed by the spirit of personal sympathy and interest in our welfare that forebears our faults in recognition of the best that is in us. These traits have stamped their influence and left their imprint on the minds of every student that ever became his pupil. In moulding the professional destiny he has unconsciously, by the force of his personal example, exerted a powerful influence in the development of those faculties which we respect and admire in our fellow creatures. The students and alumni of this institution are brought together here to-night by the spirit of loyalty it has inspired in them. We take unspeakable pleasure in paying our respects to that personality. Its light can never depart from the campus of Cornell University. May its bearer live long in the enjoyment of those gifts he has so skilfully used, and may this token of our esteem and gratitude convey to him thoughts that he has so many times expressed to us in deeds."

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Dr. Law in response said that he did not know that a cup was to be presented him until he came to the table, and if he were a younger man his emotion would be so great that to make a speech would be impossible. He said that one of his greatest pleasures would be to look upon the loving cup. He talked of his early experiences in this city and said that when he came to the United States he came here to stay, to make it his home and to do his work. He said that his work had not been that of a genius but of hard labor. His best advice to students was not to jump at conclusions, but to do their work faithfully.

The cup presented Dr. Law, a magnificent specimen of the jeweler's art, was made by Tiffany of New York.

The banquet committee was as follows: F. H. McNair, Chairman; F. W. Andrews, A. J. Burley, J. G. Wilis, Walter Nelligan, W. E. Frink, O. E. Williams and Cassius Way. Mr. Way acted as cheer leader.

The *menu* programme was made in imitation of Dr. Law's well-known text book, it containing an excellent likeness of him, which is reproduced herewith. The following prescription occupied the second page:

CHAPTER II.

R Crustatorum.
 Consommae regiae.
 Apii graveolentis.
 Olivae.
 Cucumeris sativis.
 Piscis lacus.
 Solani tuberosi.
 Avis cum pisco sativo.
 Lemonis frigidi.
 Bovis cum fungo.
 Phaseoli vulgaris.
 Solani tuberosi contusi.
 Piscis misturati.
 Vanillae lactis frigidi.
 Panis dulcis.
 Casei.
 Cachetis.
 Caffeinæ.

āā Q.s.

Misce et fiant boli octodecim.

Sig. Capiat statim, non repetatur.

Post cib. inhale crematum tabacum.

I. H. CHEF.

Letters of appreciation from Drs. Roscoe R. Bell, Leonard Pearson, C. W. Gay, 'or, and others were read.

Thus was fittingly ended the 10th anniversary of the founding of the N. Y. S. V. C. A permanent record of the celebration will be secured by the issuing of a University pamphlet.

F. H. MCNAIR, '05, *Chairman*.

CENTRAL CANADA VETERINARY ASSOCIATION.

The third annual meeting of the Central Canada Veterinary Association was called to order by the President, Veterinary Major Harris, on Wednesday evening, Feb. 8, at 8 o'clock.

After the minutes of the last meeting had been confirmed three applications for membership were received and accepted. The new members are Drs. W. A. McGill and W. Nichols, of Kingston, and H. S. Manhard, of Smith's Falls. Dr. Potter, one of the oldest medical practitioners of Ottawa, was elected an honorary member of the Association.

The President delivered a brief address outlining the efforts being made to have the profession organized throughout Ontario that legislation might be obtained. Through the increased value of live stock, the profession, he said, offered brighter prospects for those engaged in its practice than had been the case for many years. The movement on foot toward the establishment of municipal abattoirs would require the services of veterinarians as inspectors, and this would prove beneficial to the profession.

The election of officers for the ensuing year was then proceeded with and resulted as follows :

Honorary President—Dr. J. G. Rutherford, Ottawa.

President—Dr. T. A. Allen, Brockville.

Secretary-Treasurer—Dr. A. E. James, Ottawa.

Committee to form the Council in conjunction with these officers—Drs. Lynchke, Thacker, Fisher, McGuire, Higginson, Hollingsworth, Higgins and Harris.

Auditors—Drs. Hollingsworth and Haworth.

Instructive and interesting papers on professional topics were then presented. Dr. W. C. Young, of Almonte, gave in detail the results of some experiments he had conducted with a view to reducing "Dilatation of the Bursa of the Capsular Ligament of the Hock Joint." These experiments had not been wholly successful, but they had indicated lines on which it might be expected to obtain more beneficial results.

Dr. C. H. Higgins, of Ottawa, read a paper the title of which was, "The Veterinarian," in which he indicated the duties of veterinarians. Among the many points presented were, an indication of the necessity for veterinarians to read more and that all would be aided in their work if greater efforts were put forth to keep an accurate record of cases. It was also pointed out that autopsies are too infrequently performed by veterinarians.

Dr. A. E. James reported an outbreak of "Malignant Catarrh" in which the owner had lost a number of valuable cattle. Disinfectants and a general remodelling of the sanitary arrangements under which the animals were maintained checked the outbreak and there has up to the present been no further trouble.

Veterinary Major Massie, of Kingston, presented a paper on "Horse-Shoeing," which showed a wide and complete knowledge of farriery. He advocated the establishment of a school of farriery either in connection with the Dairy School at Kingston or the Agricultural College at Guelph, or even in connection with both institutions. In the discussion of this paper the author pointed out that there was a marked distinction to be drawn between the horseshoer and the blacksmith.

Dr. C. W. J. Haworth, of Eganville, gave an interesting account of a case that had come under his notice of a horse that had swallowed an ordinary sack needle. This produced an abscess in the flank region, which yielded to treatment. Ten months later he was called to the same animal and found an abscess in about the same region. This time on making an incision an object was found which proved to be a needle, and the owner remembered of the disappearance of same just prior to the appearance of the first abscess.

An extended discussion took place on all of the papers and many interesting and practical points were brought forward.

Many members were interested in the subject of milk fever and it was freely discussed, it being the opinion of the majority present that the "oxygen treatment" was the only method that deserved consideration by the practitioner who had at heart his own interests and those of his client.

The Council was instructed to make arrangements for a mid-summer meeting which should take the form of a surgical clinic under the direction of an expert surgeon, the time and place depending upon the surgeon and the material offered.

Dr. Higgins as reporter for the Association was instructed to edit and have printed a sufficient number of copies of the

proceedings of this meeting that each member could have one.

The members present were: Drs. A. W. Harris, A. E. James, W. W. Boucher, J. B. Hollingsworth, C. H. Higgins, C. J. Marshall, and Thos. Potter, of Ottawa; T. A. Allen and D. McAlpine, Brockville; Thos. Thacker, Renfrew; W. C. McGuire, Cornwall; C. W. Haworth, Eganville; T. C. Young, Cobden; W. D. Monk, South March; Geo. W. Higginson, Rockland; G. A. Hay, Campbellford; T. Johnson, Peterborough; P. W. Kenning, Pembroke; A. M. McKay, Winchester; W. C. Young, Almonte; A. G. Young, Merrickville; and A. J. Telmosse, Hull.

C. H. HIGGINS, *Reporter*.

SCHUYLKILL VALLEY VETERINARY MEDICAL ASSOCIATION.

The semi-annual meeting of this Association was held at the Board of Trades Room, Reading, Pa., Dec. 21st, 1904. The meeting was called to order at 10 A. M. by the President, Dr. E. D. Longacre. The minutes of the previous meeting were read and approved. Dr. Longacre then delivered the President's annual address.

The following members were present: Drs. D. R. Kohler, I. C. Newhard, W. G. Huyett, E. D. Longacre, O. G. Noack, W. S. Longacre, F. H. McCarthy, and U. S. G. Bieber. Among interesting visitors were Dr. N. Rectenwald, Veterinarian of the Humane Association, of Pittsburgh, and John Reber, of Shamokin.

The Secretary submitted and read several letters of communication and correspondence. Dr. Noack gave an interesting account of the Pennsylvania Veterinary Medical Association meeting, held at Harrisburg, Pa., Sept. 20th, 1904, after which he incidentally explained the objects and principles of the Veterinary Bill framed by that Association, which is in part: Repealing clause of Sec. 8 of the Pennsylvania State Veterinary Law, which says, "Any person not heretofore authorized to practice veterinary medicine and surgery in this State after the first day of July, 1896, must have pursued the study of veterinary medicine for at least three years, including three regular courses of lectures of at least six months each in different years in some legally incorporated veterinary college or colleges," and substitute as follows: "Any person not heretofore authorized to practice veterinary medicine and surgery in this State,

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and desiring to enter upon such practice, may deliver to the Secretary of the State Veterinary Examining Board, upon the payment of the fee of ten (\$10.00) dollars, a written application for license, together with satisfactory proof that the applicant is more than twenty-one years of age, is of good moral character," etc., the Board not enquiring concerning his collegiate degree, but wholly acting upon his ability and qualifications in passing an examination conducted by said Board, before he is considered competent to practice. Again, where it says: "Every practicing veterinary surgeon of Pennsylvania must be duly registered in the office of the prothonotary of the Court of Common Pleas in the said county," and substitute as follows: "Any person desiring to practice veterinary medicine and surgery in the State must hereafter register with the Veterinary Examining Board of same State." And, furthermore, to amend: "That every practicing veterinary surgeon in the State be compelled to register every year before said Veterinary Examining Board upon the payment of one (\$1.00) dollar."

A motion was made and seconded that this Association assist by all possible means, the committee appointed by the Pennsylvania State Veterinary Medical Association in bringing these measures before the legislative body assembled, and the Secretary was authorized to notify the chairman of said committee to that effect.

Dr. Kohler ably responded as chairman of the Committee of Intelligence and Education.

The Treasurer's report was accepted as read.

Dr. I. C. Newhard, Veterinarian of the Philadelphia and Reading Railroad Company Coal Mines, Ashland, Pa., who was the essayist of the occasion, gave a paper on "Open Joints and their Treatment." The paper was discussed by Drs. Longacre, Kohler, Huyett and Rectenwald and several other members present. A vote of thanks was tendered Dr. Newhard for his paper. The paper will be published in the REVIEW.

Dr. McCarthy, of Pottsville, Pa., spoke eloquently upon "Exostosis and Treatment," and the subject was well discussed by nearly all present.

A motion was made and seconded that the essayists hereafter send their papers to the Secretary one week previous to the day of session, so that they can be read and discussed, in case the essayists cannot be present or get there late.

The annual banquet of the Society was held at Krick's Cafe, Bissinger, after the business session, and it proved to be one of

the most enjoyable functions ever given under the auspices of the organization.

The essayists for the next meeting will be Drs. D. R. Kohler, A. R. Potteiger, F. N. Schneider, and Wehr.

A motion was made and seconded that the next meeting will be held at Reading, June 21st, 1905.

A motion was made and seconded to adjourn.

W. G. HUYETT, *Secretary*.

KEYSTONE VETERINARY MEDICAL ASSOCIATION.

A regular stated meeting was held at Donaldson's Hall, Broad and Filbert Sts., Philadelphia, Pa., Tuesday evening, Feb. 14th. The President, Dr. George S. Fuller, was absent and Vice-President Edgar W. Powell, Bryn Mawr, Pa., presided. The following members responded to roll-call: Drs. E. P. Althouse, H. B. Cox, D. B. Fitzpatric, W. Horace Hoskins, Joseph D. Houldsworth, Bassett Kirby, C. J. Marshall, James Mecray, Adam W. Ormeston, Edgar W. Powell, W. H. Ridge, W. L. Rhoads, John J. Repp, A. T. Sellers, S. J. J. Harger, T. S. Carlisle, Charles Dingley, Otto G. Noack, and F. H. Schneider.

Minutes of the previous meeting were read and approved.

Dr. W. H. Ridge reported a case that had come recently under his observation. This was a case of a gray gelding, about twelve years old, weight about 1,200 lbs., used for pleasure driving in the city. It had recently developed an aggravated case of stringhalt. With rest the symptoms would nearly disappear, but when exercised for a short time he would lift the feet so high that they would strike the under part of the abdomen with considerable force. Dr. Ridge was unable to account for the cause or the lesion that might produce such symptoms. The horse seemed to be well in every other particular. Many questions were asked in reference to the case, but no one seemed able to account for the peculiar symptom exhibited by Dr. Ridge's case.

The regular routine of reading papers was dispensed with and the time was devoted to discussions of how to make the State meetings more interesting and instructive.

The first question that was discussed was in reference to holding clinics. After a thorough discussion of this subject, it was unanimously voted to hold a clinic. The members of the Keystone were urged to keep a watch for interesting cases and to report to the Secretary any cases that could be obtained for this purpose.

It was decided to hold the clinic at the Veterinary Department of the University of Pennsylvania, Wednesday forenoon, March 8th. The meetings are to be held at the Hotel Hanover, 12th and Arch Streets, March 7th and 8th. A smoker is to be given to the members of the profession at the same place Tuesday evening.

The University of Pennsylvania is asking for \$100,000 for equipment for a new Veterinary Department. The members of the Keystone were urged to assist in every way possible to get this amount of money. The school is badly in need of buildings and there seems to be no reason why the State should not provide them. A large proportion of the wealth of our State is in live-stock. For this reason she needs the best veterinarians in order that the losses from disease may be reduced to the minimum. We believe that if our legislators can be made to see the vast amount of money invested in live-stock, the large annual dividends obtained from this source and the large losses that might be prevented each year by competent veterinarians, they would willingly and justly provide money to educate and train men for this particular work. The work of making these facts clear will rest largely upon our profession, and we should assist in every way possible to obtain this necessary appropriation.

There is another matter before the Legislature that is of great importance to our profession. This is in reference to taking the system of registrations out of the hands of the prothonotaries and putting it in the hands of the Veterinary Medical Examining Board. There is no opposition anticipated to this measure, but we must show the legislators why this change is necessary.

It was decided to hold no meeting in March on account of the P. S. V. M. A. holding a meeting in Philadelphia at the time of our regular meeting. The meeting was regularly adjourned at eleven o'clock to meet again Tuesday evening, April 11th, at the same place.

C. J. MARSHALL, *Secretary*.

GENESEE VALLEY VETERINARY MEDICAL ASSOCIATION.

The eighth annual meeting was held at the Whitcomb House, Rochester, N. Y., on Wednesday, Jan. 25th. The following responded to the roll-call: A. McConnell, D. P. Webster, J. C. McKenzie, J. W. Corrigan, O. B. French, John Steiner, W. J. Payne, A. Geo. Tegg, Wm. B. Switzer, H. S. Beebe, Warren E. Stocking, J. H. Taylor, L. R. Webber, J. E. Smith, and Wm. F. Woolston. The morning session was devoted to the routine

business of the Association and the election of directors. The Board of Directors held a meeting during the noon hour and elected the following officers :

President—Dr. A. McConnell, Brockport.

Vice-President—Dr. H. S. Beebe, Albion.

Secretary—Dr. J. H. Taylor, Henrietta.

Treasurer—Dr. A. Geo. Tegg, Rochester.

Censors—Drs. L. R. Webber, G. C. Kesler, O. B. French, W. E. Stocking, J. E. Smith, J. W. Corrigan.

At the afternoon session the following papers were read :

"Parturient Apoplexy," by Dr. Wm. B. Switzer, of Oswego. Dr. Switzer had been so successful in treating these cases with oxygen that he now considered them among the most satisfactory cases to treat that he had. Drs. Webster, Corrigan, Stocking, Beebe and French had been using oxygen during the last year with very marked success. Dr. French reported four cases that had been treated by their owners, with the air treatment; three out of the four developed septic mammitis.

Dr. W. J. Payne, of Fairport, then read a very interesting report of an outbreak of a skin disease that he diagnosed as "Crustæ Labialis." Small pustules formed on the tongue, then on the lips and face; these broke and discharged a sticky fluid, which formed in crusts; these horses were all stabled and fed on hay and oats; nothing could be found in the feed that would be likely to cause the trouble. The cases recovered promptly under astringent antiseptic treatment.

Dr. A. Geo. Tegg reported a similar outbreak in a herd of cattle that had been fed on mouldy ensilage. This was discontinued and the cases promptly recovered without treatment.

Dr. J. W. Corrigan then read an excellent paper on "Loco in Sheep," due to the presence of *Tænia fimbriata* in the gall duct; this occurred in a flock of sheep near Batavia that had been purchased in Buffalo. The symptoms pointed to cerebral disturbance, but it was proven by post-mortem on some of the sheep that the disease was due to large numbers of *Tænia fimbriata* in the duodenum and gall ducts. Dr. Corrigan was asked many questions, which were answered by him in his pleasing style.

Several of the members who were to leave for home on the afternoon train were so interested in the papers and discussions that they forgot their trains and consequently were left. All agreed that this was the most interesting meeting ever held by the Association. The next meeting will be held in July at Rochester.

J. H. TAYLOR, *Secretary*.

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ILLINOIS VETERINARY MEDICAL AND SURGICAL ASSOCIATION.

The fifteenth annual meeting was held at the St. Nicholas Hotel, Decatur, Jan. 18-19, 1905. The meeting was called to order at 1 P. M., Jan. 18, with President Dr. F. J. Bliss, of Earlville, in the chair. The minutes of the previous meeting were read and approved. Dr. Bliss delivered his annual address. The membership attendance was above the average, with considerable interest. The following papers were read during the meeting, and thoroughly discussed: "The Use of the Stomach Pump Tube in Veterinary Practice," by Dr. F. J. Bliss, of Earlville, which was a most complete, carefully prepared paper, and very interesting, drawing forth some animated and instructive discussion. Dr. Wills read an excellent and instructive paper, "Does Nutrition Determine Sex." This paper was listened to with close attention. "Ovariectomy," by Dr. S. H. Swain, was a splendid paper, describing the teachings of modern operations, which was responded to by Dr. John Osborn. "The Action of Drugs in Equine Medicine," by Dr. S. D. Brown, of Assumption, was a very worthy and beneficial paper. "Bursal Enlargements," by Dr. J. W. Marsh, of Illiopolis, an excellent paper. "Professional Ethics," by Dr. V. G. Hunt, of Arcola, was a most excellent paper, which was fully indorsed by the Association. Under the head of "Reporting of Cases," several interesting subjects were introduced and discussed. "Strongylus Tetricanthus," by Dr. J. M. Reed, of Mattoon, offered several quotations of former and different authors on that deep subject, which was listened to with close attention.

On Jan. 19 the meeting was called to order by President Bliss.

Election of officers being in order the following were chosen:
President—Dr. F. J. Bliss, Earlville.

First Vice-President—Dr. S. H. Swain, Mt. Pulaski.

Second Vice-President—Dr. John Osborn.

Secretary—Dr. J. M. Reed, Mattoon.

Treasurer—Dr. V. G. Hunt, Arcola.

Committee on Membership—S. H. Swain, S. D. Brown, John Osborn, H. P. McKinney, John Turrill.

Committee on Programme—F. J. Bliss, James M. Reed, J. W. Marsh.

Committee on Arrangement—John Osborn, W. H. Swain, R. W. Brathwait.

Committee on Legislation—S. H. Swain, V. G. Hunt, F. J. Bliss.

Treasurer V. G. Hunt reported a balance of \$16.75 on hand. Bill of \$5.15 allowed the Secretary for stationery and stamps.

Meeting adjourned. Next semi-annual meeting to be held in Champaign, and at such date as may be selected by Committee on Arrangements. JAMES M. REED, *Secretary*.

OHIO VALLEY VETERINARY MEDICAL ASSOCIATION.

The above-named association was organized in Evansville, January 25, to embrace the veterinarians of Southern Illinois, Southwest Indiana and Western Kentucky.

There were about thirty representatives of the veterinary profession in the three states at the meeting and it is expected ultimately the membership will reach 75 or 100. Quarterly meetings will be held, the next one to be in Evansville some time in April. It is expected the territory of the Association will extend 100 miles from Evansville. Such an organization has been under discussion since last summer and really had its inception at the national meeting held last year in St. Louis. Calls for the initial meeting were sent out last week by Dr. John R. Mitchell, of Evansville, and the meeting was held at his new veterinary hospital in Upper Fourth Street. The object of the organization is the mutual benefit of the members and their professional advancement. It in no way conflicts with the State or national organizations, but is rather supplemental to them and affords opportunities for more frequent meetings and consequent benefit.

The morning was spent in the reception of visitors, in becoming acquainted and in holding a clinic at which several interesting and valuable operations were performed. In the afternoon the society was organized with the following officers:

President—Dr. John R. Mitchell, Evansville.

Vice-Presidents—Illinois, Dr. A. Robertson, Mount Carmel; Kentucky, Dr. James Campbell, Henderson; Indiana, Dr. J. W. Snider, New Harmony.

Secretary—Dr. J. W. Moses, Mount Vernon, Ind.

Treasurer—Dr. D. A. Davison, Princeton, Ind.

Dr. W. G. Hassell, of Grayville, Ill., Dr. D. A. Davison, of Princeton, Ind., and Dr. Alex. Marvel, of Owensville, Ind., were appointed a committee on by-laws to report at the next meeting.

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During the afternoon Mrs. Mitchell served a lunch which was much appreciated by the members of the new organization. The visitors were much interested in Dr. Mitchell's hospital, which was declared to be complete in every detail.

KANSAS STATE VETERINARY MEDICAL ASSOCIATION.

The Association met in the Council Chambers in Topeka, Jan. 10, at 10 A. M., President Dr. Pritchard presiding. Business was transacted as lively as possible, so as to discuss and adopt a measure to present to the legislature this session, which is now in the hands of the representatives. Our bill was introduced on Jan. 25th. I have been unable to learn anything from it since, except that it was referred to the Committee on Live Stock.

The discussion on the bill was lively and interesting; but took up so much time that we were obliged to dispense with our programme, so as to elect officers and get through so that the boys could catch a night train to Kansas City, where they wished to attend the Missouri Valley Veterinary Association. Most of the officers were reëlected, and several new members were admitted. We now have a membership of 42, but expect to have at least 50 in a short time.

Our next meeting will be in Topeka, Jan. 11, 1906. I feel sure of a law for Kansas this time.

HUGH S. MAXWELL, V. S., *Secretary*.

TEXAS VETERINARY MEDICAL ASSOCIATION.

The third annual meeting of this Association will be held in the Live Stock Exchange Building (Union Stock Yards), Fort Worth, Friday, March 24, at 9.30 A. M. Members and visitors will be escorted through the packing plant by Fort Worth members. A collection of pathological specimens from meat producing animals, will be exhibited by members of the Bureau of Animal Industry at Fort Worth, after which there will be a discussion upon them.

The papers announced are as follows: "Behring's Work on Suppression of Tuberculosis," by Dr. J. H. Rietz; "Traumatism in Beef Animals," by Dr. H. D. Paxson; "Cattle and Sheep Scab," by Dr. J. W. Parker; "Food Poisoning," by Dr. E. L. Lewis; "Fistulous Tracts and their Treatment," by Dr.

W. G. Langley. There will also be promiscuous reports of cases by various members.

Dr. M. Francis, College Station, is President, and Dr. A. E. Flowers, Dallas, is Secretary.

A report of the meeting is promised the REVIEW.

PENNSYLVANIA STATE VETERINARY MEDICAL ASSOCIATION.

The annual meeting will be held at Philadelphia, Tuesday and Wednesday, March 7th and 8th, 1905, in the Hotel Hanover, 12th and Arch Streets. Every veterinarian and friend of the profession is cordially invited to be present. An account of the meeting will be published in a later REVIEW.

B. T. WOODWARD, V. M. D., *Rec. Sec'y.*

THERE are more operating tables in use and in process of installation in Brooklyn than in any other city in the country.

BILL AIDS MONKEYS.—*Lincoln, Neb., Feb. 15.*—Union hours for monkeys when owned by organ grinders is one of the provisions of a bill passed by the Nebraska Assembly yesterday. The measure in general prohibits cruelty to animals and was introduced at the request of the Nebraska Anti-Cruelty Society. Its authors, however, were prompted to include the provision concerning monkeys by the methods of a band of hand-organ grinders at the State Fair last year, who used monkeys in the gathering of coins from twelve to sixteen hours a day. Hereafter any organ grinder working a monkey more than eight hours a day will be subject to a heavy fine.—(*N. Y. Evening Sun, Feb. 15, 1905.*)

MELBOURNE VETERINARY COLLEGE.—Lately a paragraph has appeared in the newspapers stating that the Melbourne Veterinary College would probably be closed. The Victorian S. P. C. A. deplors that event as a calamity which it hopes may be averted. Says the Society: "In a country such as this where so much of the support and of the wealth of the community is derived from and depends on animals, every effort should be made to retain in the highest state of efficiency an institution for the education and training of men thoroughly to understand the care and treatment of animals in health and disease, and not to allow a return to the bad old way of leaving the treatment of sick animals in the hands of persons who have had no proper scientific training for the work.—(*Our Animal Friends, February, 1905.*)

NEWS AND ITEMS.

MRS. OLOF SCHWARZKOPF has been quite ill from sciatic rheumatism at Fort Assinniboine, Montana.

THE next meeting of the Missouri Valley Veterinary Association will be held in Omaha in June.

DR. NELSON P. HINKLEY, of Buffalo, N. Y., was a caller at the REVIEW office in February. He is in excellent health and reports business good.

DR. S. E. HERSHEY, Charleston, W. Va., and O. J. Phillips, Holden, Mo., are among the list taking the post graduate course at the Kansas City Veterinary College.

DR. W. D. CRITCHERSON and family, of New York City, are spending the late winter at Los Angeles and other resorts in California.

MRS. EFFIE WALLACE, wife of W. B. Wallace, V. S., Marion, Indiana, died on January 19 of pneumonia. She was a most estimable lady, formerly Miss Shade, of Greenville, Ind.

C. D. MCGILVRAY, V. S., M. D. V., Binscarth, Manitoba, contributed an interesting article on "Breeding Better Horses in the West" to the Christmas number of the *Farmers' Advocate*.

DR. W. F. JONES, B. A. I., located at McCook, Neb., has recently returned to his post, after a pleasant vacation spent in visiting the World's Fair, his old home in Ohio, and his friend Dr. McKim, at Norfolk, Neb.

MICE exposed to radium for twenty days, in the experiments of Dr. Roux, of Paris, lost their hair; and when the hair grew again it was quite white. Longer exposure developed muscular paralysis.

THE STUDENTS of the Veterinary Department of the Washington State College at Pullman have a flourishing veterinary medical association which meets on the first and third Fridays of each month. Particulars in the directory of association meetings.

DR. W. L. WILLIAMS, professor of surgery at the New York State Veterinary College, has been suffering from a severe cold all winter, and, being unable to rid himself of it in the cold climate of Ithaca, left for Florida on the 17th ult., where we sincerely trust he may find the relief which he seeks.

IT is claimed that by nailing a strip of sheepskin about eight inches in width the entire length of the manger, selecting a skin covered with long wool and sprinkling it freely with cayenne pepper (renewing the pepper occasionally), the worst cribber may be cured of the habit.

F. S. SHOENLEBER, M. D., D. V. S., who has filled the Chair of Anatomy for the past eight years at the McKillip Veterinary College, Chicago, Ill., has been elected to the Chair of Veterinary Science in the Kansas State Agricultural College at Manhattan, Kansas. His resignation at the McKillip will take effect at the close of the present term.

RULING PASSION.—“Now, Dr. Pullen, I want you to fix my teeth up in good shape,” said the lady to her dentist. “Depend upon me to do that, ma’am” replied the man behind the chair. “You see, I’m keeping company with a veterinary surgeon now, and I know, before he proposes, he’ll want to look at my teeth to see how old I am!”—(*Yonkers Statesman*.)

“PROCEEDINGS” OF THE A. V. M. A.—Dr. Richard P. Lyman, Chairman of the Publication Committee of the American Veterinary Medical Association, has asked the REVIEW to publish the following notice: “Many inquiries have been received by the Chairman of the Publication Committee as to the possibility of obtaining a copy of the published report of 1904. Copies of this report can be had upon application to the Librarian of the A. V. M. A., Dr. W. L. Williams, Ithaca, N. Y., for \$2.50 per volume.”

ONE OF THE FLORIDA VARIETY.—The following letter was received by Dr. Chas. F. Dawson, State Veterinarian of Florida, Lake City, and is reproduced *verbatim*:

“Hon Veetnary of state of Fla. Dear Sir will you Please let me know what kinde of an examination you Require before you will Permission or give a lisen to Run a vatenary stable, or work on or use meadicen on sick animals, I have had 15 years expearence in Curing horses, and now I want to set up a veterinary stable for my self. and would like to Pass an examination on administerun medicine and Prepairing same Please let me hear from you earley and what will a sutifickate Cost I am known all over the state as a vatenary. Will Refer your Honor to the Hon. * * * he knows me well. Yours truly

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A SPLENDID TRIBUTE FROM THE BREEDER'S GAZETTE.—The following question and answer appeared in the *Gazette* of February 18: “C. S. T., Harrisville, Utah, writes: ‘I am informed that in Chicago there is a splendid institution promoting the science of veterinary medicine. Sometime within the next twelve months I desire to identify myself with some one of the veterinary colleges. In view of the fact that the tendency of the farming community and the lovers of all classes of

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stock is to relegate far to the rear the mongrel and substitute therefor the animal with pure blood lines, is it not, in your judgment, a most opportune time for a young man to take up the study of veterinary medicine, and may he not expect greater remuneration from a pecuniary viewpoint, and at the same time the profession command greater respect than at any time heretofore? In these parts there seems to be a disposition not at all favorable to this particular profession.' *Answer.*—Our correspondent is certainly correct in his views as to the time being opportune for entering the veterinary profession. It is strange, however, that a prejudice exists against that profession in his neighborhood. There was a time when the so-called veterinarian was so very generally a quack that the public had little faith in and less respect for him, but veterinary science and education have progressed so far now that this prejudice, reasonable or unreasonable as it may have once been, has been for the most part removed. Indeed the veterinarian properly educated nowadays stands on a complete professional equality with the M. D. providing he is alive to the demands of the hour and deports himself accordingly. Our correspondent is to be congratulated upon his determination to seek this instruction at the best available sources. In this line of life as in all others there is the most room at the top. Furthermore the demand for the services of well-educated veterinarians is in excess of the supply. The distribution of pure-bred stock of all kinds is now so wide and so many rich men have farms as side issues that a thorough knowledge of veterinary medicine is a very marketable commodity."

IN FAVOR OF DEHORNING.—The *Live-stock Report*, published by one of the largest live-stock commission dealers in the United States markets, has the following on dehorning:—"The appearance of occasional large bunches of horned cattle at the various markets justifies the reiteration of the facts concerning the comparative value of horned and dehorned steers. The feeder will tell you that he leaves the horns on because he believes it cruelty to remove them; another thinks his cattle look better with horns. If a person once sees a few loads of horned cattle arrive at the market, some with their sides gouged, and the hide materially injured, and others with the horns broken off by contact with the car, he will cease to believe in the cruelty of removing horns in the proper manner. On the other hand there are very few men who can afford in this day of close competition to lose twenty cents per hundred

pounds on their cattle simply to have them more pleasing to the eye. At the present time, the shipping and export trade furnishes the outlet for the greater part of the choice steers that reach this market, and buyers for that trade seldom, if ever, purchase a horned steer. With them this discrimination is not a matter of sentiment, but one of dollars and cents, as more dehorned cattle can be shipped in a car, and this without so much danger of injury. The removal of this competition invariably causes horned beeves to sell fifteen cents to twenty-five cents lower than dehorned steers of the same quality. Add to this the increased docility and lessened injury to dehorned cattle in the feed-lot, and you have the practical reasons why horns are objectionable to the beef producer. The process of dehorning is simple, and if properly attended to can be performed without injury to the cattle. Where possible, the dehorning of the calves is always the safest method, but on older cattle dehorning in the fall seldom produces any noticeable bad effect. This article is not intended to give any new ideas on the subject in hand, but simply to keep before the minds of cattlemen a point which often means the loss of dollars if neglected."

HORSE-SHOEING.—The practice of paring away the sole of the foot, or, in other words, thinning it, is a pernicious one. The shoer appears to like to do this, as it cuts very easily and gives, as he thinks, a very neat appearance to the hoof. The owner appears to endorse this, as he is very careful to have his groom stop the feet, forgetting that he has permitted the shoer to remove a much more efficient stopping than any artificial one in the outer surface of the sole. This is very easy of explanation and illustration, if one examines an un mutilated hoof. First of all, it must be noted that the outer hard and tough crust, called the wall, grows out indefinitely, unless it is worn or broken off by contact with the ground or reduced by the instruments of the shoer. This is not the case with the sole, for it is so constituted that after it attains a certain thickness, by a process of nature, it exfoliates of its own accord, thus maintaining its normal thickness. These outer scales that keep coming out are nature's stopping. Why? Because by protecting the inner and deeper layers from the drying-process effects of the air they maintain all the moisture that is necessary in the sole. If you cut through by paring, and examine a normal sole, you will find that the part next to the quick (the part freshly secreted by the quick) is moist, and as you proceed to the surface of the sole it gradually gets drier, the outer part being almost

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entirely free from moisture and admirably adapted to protect the inner and moister part until it gradually is forced outward by fresh growth within, and becomes, in its turn, a "stopping" for the inner and freshly-formed layer of sole. What happens if the knife is used instead of nature being allowed to go on with its process of desquamation? The deeper parts of the sole become exposed to the action of the air before they are prepared for it, by a gradual process of drying, and abruptly dry and contract. This is what causes the sole to become increasingly cupped and the hoof to become contracted, in a measure. The stopping of horses' hoofs is not necessary, as a rule, if the sole is left as it should be, in an unmutilated condition. All the fuss and waste of time and material involved in the stopping of horses' hoofs is based on error. All that is necessary to remove of the sole in a normal foot is accomplished when the rasp is flatly applied to the lower surface of the wall in reducing it to its proper dimensions. The thicker the sole, the better, providing it does not project below the wall. One can readily understand how much more efficient a thick sole is as a protection to the underlying quick, especially on rough, frozen and stony roads, than a comparatively thin one. Now, if the sole is as thick as it should be, and in such case the white line would necessarily be, it is a good guide to the shoer in the majority of cases to rasp down to the white line. Another error frequently made, though not so commonly as mutilation of the sole, is cutting away the frog. It does not require a deep student of physiology of the foot to see almost at a glance the function of the frog. Take a normal hoof and examine the frog, and you will observe that it is placed at the back of the hoof where the major portion of the pressure comes. You farther find that, unlike either the sole or the wall, it is endowed with elasticity to a degree equalling India-rubber, so it is very evident that it is not only intended to come in contact with the ground, but also to act as a buffer in lessening concussion. Now, what happens if you cut it away and leave the heel so high that the frog does not come in contact with the ground? It shrinks and becomes as hard as wood, entirely unsuited to stand pressure without bruising the underlying quick, and no longer capable of performing its office of breaking concussion. Not only that, but with a thin, dried-up sole, the shrunken hoof draws the quarter with it, and you have contracted feet, or at least heels. After this mischief has been done through ignorance, then the horse must have that cure of all ills of the

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foot (according to some wise ones)—spreaders—to overcome the contraction of the hoof. Although horses are largely kept under artificial conditions there is no reason why their hoofs should become contracted if rationally treated, unless some disease of the foot develops, such as navicular disease. Under such circumstances, the contraction is the result of disease, not the cause. Another pernicious practice among shoers is that of "opening the heels," which weakens the hoof and sometimes causes heel cracks, which are even more obstinate to treat than quarter-cracks. "Opening the heels" is supposed to overcome contraction of that part of the hoof, but it is more likely to help it along, under usual conditions, than it is to overcome it. Another point that should be carefully watched in preparing the hoof for the reception of the shoe is to have it level. If either inside or outside of the hoof is left too long, it changes the direction of the line of weight and subjects some portion or portions of the extremity to undue strain or pressure, and the consequent liability to injury. Horses that are turned out into soft fields or put into box stalls or barnyards, where there is not sufficient attrition to wear the hoof to its normal dimensions, should have it rasped down every month to its proper proportions. This particularly applies to colts, and neglect of it is the initial step in causing hoofs of defective formation. The practice is very general when city horses are turned out in the country, for some reason or other, to put "tips" on the hoofs to prevent breaking of them. This plan is a very good one, if the tips are properly applied, but the way it is usually done is most irrational. The usual course is to prepare the hoof as for ordinary shoeing, then put a tip on about a quarter of an inch thick. The lengthening of the toe without a corresponding lengthening of the heel leads to tilting backward of the foot when it is placed on the ground. The toe, protected by the tip, grows, while the heel does not, so that the condition becomes intensified, and a great strain is put upon the supporting structure of the fetlock, and the normal relations of the various parts of the fore legs are disturbed. All this may be avoided by using light tips and having them completely sunken in a groove made in the wall around the toe, so that their lower surface is flush with the wall at the heel. In this way the level of the hoof is maintained, there is normal pressure on the frog and heels, and no breaking of the wall. In other words, the hoof is placed in perfectly natural conditions without the danger of too rapid breaking off of the wall.—(*F. C. Grenside, V. S., in Breeder's Gazette.*)

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VETERINARY MEDICAL ASSOCIATION MEETINGS.

In the accompanying table will be found the dates, places of meeting, and Secretaries' names and addresses of all the Veterinary Medical Associations of the United States and Canada. Secretaries are requested to see that their organizations are properly included in the list.

Name of Organization.	Date of Next Meeting.	Place of Meeting	Name and Address Secretary.
American V. M. Ass'n.....	August 15-18.	Cleveland, O.	J. J. Repp, 5249 Addison St., Phila., Pa.
Vet. Med. Ass'n of N. J.....	July 13 14, 1905	Wash'gton Pk	W. H. Lowe, Paterson.
Connecticut V. M. Ass'n.....	.....	.....	B. K. Dow, Willimantic.
New York S. V. M. Soc'y....	September, 1905	Ithaca.	W. H. Kelly, Albany, N. Y.
Schuylkill Valley V. M. A....	June 21, 1905.	Reading, Pa.	W. G. Huyett, Wernersville.
Passaic Co. V. M. Ass'n.....	March 6, 1905.	Paterson, N. J.	H. K. Berry, Paterson, N. J.
Texas V. M. Ass'n.....	March 24.	Fort Worth.	A. E. Flowers, Dallas.
Massachusetts Vet. Ass'n.....	Monthly.	Boston.	F. J. Babbitt, Lynn, Mass.
Maine Vet. Med. Ass'n.....	April, 1905.	Waterville.	C. L. Blakely, Augusta.
Central Canada V. Ass'n.....	.....	Ottawa.	A. E. James, Ottawa.
Michigan State V. M. Ass'n....	.....	.....	Judson Black, Richmond.
Alumni Ass'n N. Y.-A. V. C....	April, 1905.	141 W. 54th St	W. C. Miller, N. Y. City.
Illinois State V. M. Ass'n.....	Feb. 15, 1905.	Decatur.	W. H. Welch, Lexington, Ill
Wisconsin Soc. Vet. Grad.....	Call of Pres't.	Racine.	S. Beattie, Madison.
Illinois V. M. and Surg. A....	Call of Com.	Champaign.	J. M. Reed, Mattoon.
Vet. Ass'n of Manitoba.....	July, 1905.	Not determ'd	F. Torrance, Winnipeg.
North Carolina V. M. Ass'n....	.....	.....	T. B. Carroll, Wilmington.
Ontario Vet. Ass'n.....	July, 1905.	London, Ont.	C. H. Sweetapple, Toronto.
V. M. Ass'n New York Co.....	1st Wed. ea. mo.	141 W. 54th St	D. J. Mangat, N. Y. City.
Ohio State V. M. Ass'n.....	.....	Columbus.	W. H. Gribble, Wash'n C. H.
Western Penn. V. M. Ass'n....	1st Wed. ea. mo.	Pittsburgh.	F. Weitzell, Allegheny.
Missouri Vet. Med. Ass'n.....	August, 1905	Kansas City.	F. F. Brown, Kansas City.
Genesee Valley V. M. Ass'n....	July, 1905.	Roch'ter, N. Y.	J. H. Taylor, Henrietta, N. Y.
Iowa State V. M. Ass'n.....	January, 1906.	Ames.	H. C. Simpson, Denison, Ia.
Minnesota State V. M. Ass'n...	.....	.....	J. G. Annand, Minneapolis.
Pennsylvania State V. M. A....	March 7-8.	Philadelphia.	C. J. Marshall, Phila.
Keystone V. M. Ass'n.....	2d Tuesday of each month.	Philadelphia.	C. J. Marshall, 2004 Pine St., Phila
Colorado State V. M. Ass'n....	1st Mon. in June	Denver.	M. J. Woodliffe, Denver.
Missouri Valley V. Ass'n.....	.....	Kansas City.	B. F. Kaupp, 3712 Michigan Ave., Kansas City.
Rhode Island V. M. Ass'n....	.....	.....	T. E. Robinson, Westerly, R. I.
North Dakota V. M. Ass'n....	January, 1906.	Fargo.	E. J. Davidson, Grand Forks
California State V. M. Ass'n....	Mch. Je. Sep, Dec	San Francisco	P. H. Browning, San Jose.
Southern Auxiliary of California State V. M. Ass'n....	Jan. Apl. Jy, Oct.	Los Angeles.	H. D. Fenimore, Los Angeles
South Dakota V. M. A.....	.....	.....	E. L. Moore, Brookings.
Nebraska V. M. Ass'n.....	.....	.....	A. T. Peters, Lincoln.
Kansas State V. M. Ass'n....	.....	Topeka.	Hugh S. Maxwell, Salina.
Ass'n Médécalle Veterinaire	1st & 3d Thur.	Lect. R'm La-	J. P. A. Houde, Montreal.
Francaise "Laval,".....	of each month.	val Un'y Mon.	.....
Alumni Association A. V. Col..	April each yr.	New York.	F. R. Hanson, N. Y. City.
Province of Quebec V. M. A....	March, 1905.	Mon. & Que.	Gustave Boyer, Rigand, P. Q.
Kentucky V. M. Ass'n.....	.....	.....	D. A. Piatt, Lexington.
Wolverine State V. M. Ass'n....	.....	.....	W. W. Thorburn.
Washington State Col. V. M. A.	1st & 2d Friday	Pullman, Wa.	Wm. D. Mason, Pullman.
Ohio Valley V. M. Ass'n.....	April, 1905.	Evansville, I'd	J. W. Moses, Mt. Vernon, Ind.

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